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THE
NUMISMATIC CHRONICLE
AND
JOURNAL OF
THE ROYAL NUMISMATIC SOCIETY



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AND
JOURNAL
OF THE
ROYAL NUMISMATIC SOCIETY

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I.

LACEDAEMON VERSUS ALLARIA.



THE rare coin-type, of which the example figured above is a new variety, has been the subject of a controversy extending over many years. Dutens and Eckhel long ago assigned it to Lacedaemon;¹ Leblond and Borrell, to Lamia;² Newton, to Allaria;³ Head, in his *Historia Numorum*, accepted this attribution,⁴ as did Wroth in the Catalogue of Cretan coins in the British Museum,⁵ and elsewhere.⁶ Svoronos showed cogent reasons for giving the coin, with Eckhel, to Lacedaemon,⁷ and Wroth subsequently adopted this attribution.⁸ Newton's attribution to Allaria continues, however, to hold the field in

¹ *Doct. Num. Vet.*, ii. p. 279. ² *Num. Chron.*, Ser. I., Vol. VI. p. 138.

³ *Num. Chron.*, *ibid.*, Vol. VII. pp. 114, 115.

⁴ *Hist. Num.*, pp. 334 and 336. ⁵ *B. M. Cat., Crete*, p. 7, Pl. II. 1.

⁶ *Num. Chron.*, Ser. III., Vol. IV. pp. 11 and 12.

⁷ *Rev. Num.*, Ser. III., vol. vii. pp. 169-172.

⁸ *Num. Chron.*, Ser. III., Vol. XVII. p. 110, footnote.

general numismatic literature, for some errors die hard. It may, therefore, not be amiss to offer a few remarks that may help to throw additional light on an interesting coinage.

Newton gave two reasons for assigning the coin to Allaria. He says that a lesser coin in the collection of the British Museum⁹ "exactly" resembles it in style and fabric, and that its legend, like that of the tetradrachm, is from right to left. The latter happens to be true of this particular piece. But the great majority of such coins have legends from left to right.¹⁰ The assertion of the identity in style and fabric of both coins cannot, as Svoronos has pointed out, be sustained. Any one may convince himself of this by looking at the plate of the British Museum Catalogue.

It has also been said, in favour of the attribution to Allaria, that the head on the tetradrachm in the British Museum Collection, and on others that have from time to time been figured elsewhere, has been conceived in a hard and dry manner which recalls that of Cretan coins.

Now it must be admitted that this type of head, as hitherto known (see B. M. Cat., *Crete*, Pl. ii. 1), is certainly unlovely and hardly befitting even martial Pallas,—for Pallas the head has always been assumed to be. This difficulty our tetradrachm removes in the main, for the features of this head, though still somewhat rigid, are certainly less sombre.

We will now briefly review the types of Lacedaemonian tetradrachms in their order, as they appear to have been issued. In doing so, we shall presently return to the

⁹ B. M. Cat., *Crete*, Pl. ii. 2.

¹⁰ Svoronos, *Crète Ancienne*, vol. i. pp. 1-4.

question as to who is represented by the helmeted head.

Five issues of tetradrachms are known. The earliest is the coin in the Berlin Collection with the name of King Areus and the types of Alexander the Great.¹¹ One might remark that the type of its obverse, the head of the national hero, Hercules, being appropriate to a Lacedaemonian coin, it may have been purposely adopted by Areus.

Next follows the well-known tetradrachm with the portrait of a king, and, on the reverse, the statue of the Apollo of Amyclae with the legend AA. The reign of Areus lasted forty-four years, from 310 to 266 B.C.; and as these coins are fairly numerous, it would seem safe to recognize in them the later issue of this king. When he placed his portrait on the coin, he may have substituted the name of the people for the regal title and name of his first tetradrachm by way of compromise.

After the reign of Areus there is a break in the coinage. The issue of tetradrachms seems to have been resumed by a strong and unscrupulous personage, the tyrant Nabis, who seized the supreme power in or about 207 B.C., and held it till his assassination in 192 B.C.

Nabis chose for his first issue the type appearing at the head of our paper.¹² On the reverse he put the figure of the national hero, Hercules, in a typical attitude well known from the coins of Antiochus II. On the other side he placed a head of stern aspect and—but for the comparatively long hair—male, rather than female, in character. The subjoined coin, however, shows the Apollo

¹¹ *Zeitsch. f. Num.*, 1875, Pl. ix, 1, p. 285.

¹² The order of the issues of Nabis has already been traced and suggested by Wroth, *Num. Chron.*, 1897, pp. 110 and 111.

of Amyclae with long hair,¹² and I consequently need not hesitate to assign the head of our coin to the same deity.

The sombre look of the face on the British Museum coin, as well as the drawn expression about the lips on



our coin, result, not improbably, from a not very successful attempt of the engraver to render the austere features and the "archaic smile" on the face of the primitive image. Thus we get a type connexion between the issues of Areus and Nabis,

both bearing the Apollo of Amyclae, which was—if we may judge by the magnificence of its great throne, bestowed by the piety of a later generation¹³—the most venerated among the oldest Laconian idols.

We next come to the second issue of Nabis as represented by the unique tetradrachm published by Lambros.¹⁴ It is a reproduction of his first, with the addition, on the reverse, of two stars as symbols of the national demi-gods Castor and Pollux, and the tyrant's name together with that of the people, ΛΑ.

His third and last coinage of tetradrachms is represented by the likewise unique coin which was formerly in the Montagu Collection, and is now in that of the British Museum.¹⁵ It bears the head of Nabis, and his name and royal title beside the Heracles on the reverse. Wroth has noticed the substitution of the laurel-wreath for the kingly diadem, and accounts for it by analogy with coins of Attalus I. The character of this head, truly *herculean* in proportion and expression, rather leads me

¹² B. M. Cat., *Peloponnesus*, Pl. xxvi. 1.

¹³ Pausanias, lib. iii, cap. 19.

¹⁴ ΠΕΛΟΠΟΝΝΗΣΟΣ, p. 89.

¹⁵ *Num. Chron.*, 1897, Pl. V. 2.

to think that Nabis of set purpose "assumes the god," for Heracles victorious is depicted on some coins (*e.g.* at Tyre) crowned with the laurel.

The same writer justly reasons,¹⁷ on the general ground of the likeness of these heads to that on the tetradrachm, that the "small change" of Nabis is to be found in the tetrobols with a bearded head (B. M. Cat., *Pelop.*, p. 122, Nos. 6-13). These coins, moreover, support my contention. The head on No. 11 wears the diadem, and must be that of a king. On Nos. 6-10 this king, as on the tetradrachm, wears the laurel, like Hercules victorious. Finally, on No. 13 we see him, with an ivy-wreath, as Nabis-Dionysos—or should one suggest Hercules bibax as the ideal striven after by the burly tyrant?

Parallel cases of monarchs disguising themselves on coins as their favourite heroes and gods are fairly numerous. Those among the Seleucid and Ptolemaic kings are well known, and need not be mentioned in detail. Another obvious instance is the tetradrachm of Philip V of Macedon, where his son Perseus figures as the eponymous hero. Less known is the rare tetradrachm of Antigonus Doson, published by Imhoof-Blumer,¹⁸ on which the king, wearing his diadem, is represented as Pan. A coin in the Berlin Collection with the same diademed head has the king's name round it, thus removing all doubt as to its identity.¹⁹ Perhaps the most curious instance is furnished by an unpublished gold stater of Demetrius Poliorcetes, in my possession, on the obverse of which the king undoubtedly appears as a male Pallas.

¹⁷ *Num. Chron.*, 1897, p. 111.

¹⁸ *Monnaies grecques*, Pl. D, 18.

¹⁹ *Das Koenigl. Muenszkabinet*, p. 119, No. 335.

In conclusion, the somewhat remarkable parallel between the issues of Nabis, so far as his tetradrachms are concerned, and those of Agathocles of Syracuse may be pointed out:²⁰—the first, with the ethnic, but without the name of the king; the next, with the ethnic and the king's name, though still without the royal title; the last, with his name and title, but no longer with the name of the people.

E. J. SELTMAN.

²⁰ *Num. Chron.*, 1874, pp. 42, etc.

II.

A UNIQUE ANCIENT BRITISH GOLD STATER OF THE BRIGANTES (? A PATTERN).



It will be in the recollection of the Fellows that I read last year a paper entitled "A Large Hoard of Gold and Silver Ancient British Coins of the Brigantes, found at South Ferriby, Lincolnshire, in 1906:" it is published with five plates in the *Numismatic Chronicle*, Fourth Series, Vol. VIII. I was then under the impression that the whole of the hoard had come into my possession, but it appears that some four gold staters had been kept back, and I have been fortunate enough to obtain them. Like the rest of the hoard, these staters are uninscribed, and three of them are very similar to those I described in my paper. One is from the same obverse and reverse dies as No. 34, Plate III., and, strangely enough, weighs exactly the same, viz. 85.2 grains. It is my intention to present this coin to the National Collection. The second coin is again from the same obverse die, viz. No. 34, Plate III., with a reverse resembling that of

No. 23, Plate III., and weighs 86·5 grains. The third is much like No. 2, Plate II., except that on the reverse the fore-leg which, is attached to the "chest" solid crescent forming the horse's trunk, is convex instead of concave to the left, and that there is a segment of a circle in front of the horse's mouth and chest; it weighs 85·7 grains.

The unique coin which gives the title to this paper weighs 85·8 grains, which is very close to the average weight of the whole series, viz. 85·7 grains. It has on the reverse (concave side) a rude horse moving to the left, very similar to the reverse of No. 6, Plate II., which it resembles in having "in the centre of the horse between the abdomen and back crescents a peculiar boot-shaped object, with the toe part directed upwards and the heel to the right, which only exists on this single specimen of the whole series" (quotation from my paper).

The obverse has a large flower-like trefoil placed almost centrally and extending to the margin of the coin: it is composed of a central rosette of seven pellets enclosed in a ring,—a sort of glorified ring ornament. Attached to the ring at equal intervals, and by a broad base, are three simple oval leaves which extend to the edge of the coin: each leaf has a well-defined midrib, with four to five oblique parallel veins on each side; in most instances these veins pierce the oval margins of the leaf and project slightly beyond. Each of the three spaces between the bases of the leaves is occupied by a small solid crescent. The whole design has some resemblance to the numismatic Tudor rose, which, however, has five segments instead of three as we have here. The background, viz. the portion of the obverse which is not

occupied by the trefoil, is covered by minute parallel striations.

This obverse is so well designed, so original, and so different to all other obverses on ancient British coins, that I am almost inclined to regard it as a pattern. A centrally placed large trefoil is unknown amongst ancient British coins, but we find amongst the Gaulish coins of the Germani a trefoil composed of three lis-shaped limbs attached to the angles of an equilateral triangle on both obverse and reverse (see Fig. 9371, Plate xxxviii., *Atlas der Monnaies Gauloises par Henri de la Tour*, 1892). The Gaulish imitations of the coins of the Aedui also exhibit on the reverses, trefoils with leaf-like limbs, which are either simply hollowed outlines, as in Fig. V. 22, or solid spindle-shaped ovals with central pellet, with, in addition, a pellet in each angle at some distance from the trefoil, as in Fig. V. 27 (see Figs. V. 22 and 27, Plate xxxix. of the same *Atlas*).

I cannot conclude this short paper without expressing the great loss I have experienced in the lamented death of Sir John Evans, from whom I always received the kindest help when in doubt about ancient British coins.

BERNARD ROTH.

III.

THE COUNTERMARKS OF CLAUDIUS I.

(See Plate I.)

SILVER COINS.

A LARGE rectangular countermark CL · CÆS occurs on several tetradrachms of Lysimachus. Those belonging to the cabinets of Berlin and Paris have been published, but the comments of their editors have not gone beyond the rather easy reading "Claudius Caesar." No one has made any remark upon the unusual form of this designation. In connexion with this subject I shall first describe the specimen in the British Museum, which is unpublished, and I shall then compare it with others which have come under my notice.

1. *Obv.*—Head of the deified Alexander the Great to r., wearing the regal broad diadem and the horn of Zeus Ammon. Behind, the countermark (4 mm. high, 11 mm. long) CL · CÆS Cl(audius) Caes(ar), reading downwards.

Rev.—ΒΑΣΙΛΕΩΣ | ΛΥΣΙΜΑΧΟΥ, in two lines, one on each side, reading downwards. Athena Nikephoros seated on a throne to l., leaning her l. arm upon a shield; on the side of the seat, the letters BY, mint-mark of Byzantium; under the seat,

a trident pointed to l. between two small dolphins; under the r. hand of the goddess, monogram ΠE .

Diameter: in breadth, 39 mm.; in height, 28 mm. Wt. 14.50 grams. [Pl. I. 1.]

British Museum.

For the types and the monogram, see L. Müller, *Die Münzen des thrakischen Königs Lysimachus*, Pl. ii. 5; v. 202.

2. *Obv.*—Similar head. Same countermark, higher by half a millimetre, slightly encroaching upon the back part of the head, reading downwards.

Rev.—Similar type; same legend; same mint-mark ΣY ; under the right hand of Athena, monogram ΣP ; in front, incuse letter Δ , value-mark of the coin (4 drachms = 4 denarii).

Diameter, 30 mm. Wt. 11.74 grams; injured; pierced to right of head; an angular notch near the countermark. [Pl. I. 2.]

Kaiser-Friedrich-Museum, at Berlin; formerly Prokesch-Osten Collection.

For the types and the monogram, see L. Müller, *op. cit.*, Pl. ii. 5; v. 197.

This countermarked coin was first published by Count Prokesch-Osten, in the *Num. Zeit.*, Bd. iv., 1875, p. 227, and again described by Alfred von Sallet in *Beschreibung der antiken Münzen in den Königl. Museen zu Berlin*, Bd. i., 1888, p. 324, No. 166.

3. *Obv.*—Similar head; same countermark, of same size as that of No. 1, at 2 mm. interval from the back part of the head, reading downwards.

Rev.—Similar type; same legend; same mint-mark BY; under the right arm of Athena, monogram $\overline{\text{P}}\overline{\text{A}}\overline{\text{E}}$.

Diameter: in breadth, 39 mm.; in height, 30 mm. Wt. 13.42 grams.

Bibliothèque Nationale, at Paris.

This coin, given by M. G. Schlumberger, in 1896, to the National Collection (*Rois de Thrace*, No. 25), has been transferred to the special series of countermarked coins under arrangement. It has been briefly noticed, with a sketch of the obverse, by M. Adrien Blanchet, in the *Revue Numismatique*, xi., 1907, p. 41.

This same monogram has been described on a specimen in the Hunter Collection by G. Macdonald, *Catalogue of Greek Coins*, i. p. 430, No. 40.

This double occurrence leads me to suppose that Müller's engraving of the monogram $\overline{\text{P}}\overline{\text{A}}\overline{\text{E}}$ (No. 117) was copied from a worn example on which the letter \odot is not visible. The Hunter coin enables us to solve the monogram into $\overline{\text{E}}\overline{\text{P}}\overline{\text{Y}}\odot\overline{\text{P}}\overline{\text{A}}$ (*ion*), showing that Erythrae was one of the cities in alliance with Byzantium; for other instances of such alliance-symbols, see Müller, p. 57. For my own part, I doubt whether they had any political significance. Byzantium might have occasionally minted for the Erythraeans, or for any other city short of commercial currency. We daily witness European mints coining for foreign countries, or even for private bankers, who merely provide the necessary ingots.

The above description shows that the countermark $\overline{\text{CL}} \cdot \overline{\text{C}}\overline{\text{A}}\overline{\text{S}}$ occurs only on tetradrachms issued from the mint of Byzantium, at various intervals, after the reign of Lysimachus, whose monetary types continued to be imitated long after his death, which happened in the

year 281 B.C. Three years later, Thrace was overrun by the invading Galatai under Komontorios, founder of a kingdom at Tyle, in the Haemus district, which lasted for more than seventy years. The rude workmanship and debased style of these tetradrachms show plainly that they were fabricated during the occupation of the country by the barbarians. The countermarks were impressed by different stamps.

As to the remarkable peculiarity of a Latin countermark on silver Greek coins, the currency of which was limited to the eastern parts of the Empire, we must conclude that it could only have been placed there by a Roman governor of the province, since the civic authorities had no control over silver currency, though they might occasionally have enjoyed the privilege of coining copper.

If we go further into the examination of the countermark, we at once notice the omission of the praenomen Tiberius, which usually heads the monetary legends of the Emperor Claudius I, under the abridged form TI. The unique exception that may be adduced is a second brass coin of Babba (Mauretaniae) belonging to the Brera Museum at Milan, formerly in the San Clemente Collection—

Obv.—CLAVD CAESAR. Head of Claudius I, laureate.

Rev.—GEN PVBL D D. Female figure holding patera in r. hand, and cornucopine in l.¹

Nevertheless, it is true that the plain designation "Claudius Caesar" occurs also in Suetonius, and

¹ *Musei Sanelementiani numismata selecta imperatorum romanorum graeco, aegyptiaca, et coloniatarum*, ii. p. 83.

in Priscian's writings;² but these rare instances do not count for much, in a question of an official formula, against the immense majority of examples showing that "Ti. Claudius Caesar" was the usual and proper designation.

On this point, epigraphic monuments agree completely with monetary legends, and there also an exceptional instance of the anomalous form "Claudius Caesar" deserves special attention. It occurs on a memorial stone recording the career, *curriculum vitae*, of Tiberius Plautius Silvianus Aelianus,—who had been appointed to the highest posts, including that of aide-de-camp, or *comes*, to the Emperor—throughout the campaign against the Britons in the years 43 and 41. He was *consul suffectus* in the next year, and according to regulations, at least five years later, proconsul of the province of Asia, shortly before the death of Claudius, 13th October, 54.

I subjoin the beginning of this inscription,³ in view of its importance for the point that I wish to elucidate—

"Ti(berio) Plantio, M(arci) f(ilio), Ani(ensi tribu), |
Silvano Aeliano, | pontif(ici), sod(ali) Aug(ustali), | III
vir(o) a(uro) a(rgento) a(ere) f(lando) f(eriundo), q(uaes-
tori) Ti(berii) Caesaris, | legat(o) leg(ionis) V in Ger-
mania, | pr(aefecto) Urb(i), legat(o) et comiti Claud(ii) |
Caesaris in Britannia, consuli, | proco(n)s(uli) Asiae,
legat(o) propraet(ore) Moesiaae," | &c., &c.

The unusual form of the designation, "Claudius Caesar," links the countermark of the tetradrachms to the *curriculum vitae* of the former aide-de-camp who became proconsul of Asia in the reign of Claudius. It

² Suetonius, *Vita Claudii*, i.; Priscianus, *Grammatica*, i.

³ *Corpus inscriptionum latinarum*, xiv. 3608 (Tibure).

then becomes obvious that Plantius Silvanus is the very magistrate who ordered that it should be struck in the same characteristic form. His apparent object was to assimilate the old Byzantine tetradrachms, still in currency after having circulated more than two centuries and a half, to the cistophori issued from the mint of Ephesus under his control, and that they should be accepted for three denarii of his quaestor's money; hence a depreciation of 25 per cent. inflicted upon the tetradrachms, and considered by the inhabitants as an actual spoliation. The incuse Δ impressed upon the coin No. 2, in apposition to the countermark, and as a reminder that the tetradrachm was materially equivalent to 4 drachms or 4 denarii, represents the popular protest against the imperial edict signified by the formula CL · CAES.

COPPER COINS.

For further investigation of the subject, it must be remembered that, in point of law, Claudius was not a member of Augustus's family, the Julia gens, either by birth or by adoption, and having remained in the Claudia gens he was not entitled, even by courtesy, to the surname of Caesar, which was the family property of the Julii. His name at full length was merely Ti. Claudius Nero Germanicus, which is inscribed on the triumphal arch of Pavia after all the Caesarian kin.⁴

After the murder of Caligula, he was at first proclaimed *imperator* by the praetorian cohorts. The Senate, who was partly inclined to restore the republican form of

⁴ *Corp. insc. lat.*, v. 6416.

government with the support of the urban cohorts, and who had even convoked Claudius to take part in the deliberation, did not yield until the next day to the combined pressure of the praetorians and of the popular multitude.⁵ The military acclamation by which Claudius was saluted, having been ratified in the tumult, became his official title under the qualification of commander-in-chief added to his bare name, *Tiberius Claudius, imperator*, until he fixed himself the form of his further designation and imperial title. This title was expressed by means of countermarks struck in haste on coins of Caligula and other predecessors, for the purpose of attesting without delay his accession to sovereignty, whilst the mint was preparing the new regular coinage.

The extant varieties of the above formula exhibit different spellings and abbreviated monograms: TIB and TI for Tib(erius), Ti(berius);⁶ C, CL, and CEN for C(laudius), Cl(audius), Clau(dius); IMP and IM for Imp(erator), Im(perator). I know no instance on the larger coins (sestertius and dupondius), and from that peculiarity I infer that the order for countermarking given by the Senate to the mint officers expressly specified only asses, without mention of any other coin.

4. *Obv.*—M · AGRIPPA L · F · COS · III. Head of Agrippa to l., with rostral crown. Behind, rectangular countermark (3 mm. high, 12 mm. long, reading downwards)

TI CENIM

 Ti(berius) Clau(dius) Im(perator).

As of Agrippa. [Pl. I. 4.] My Collection.

⁵ Suetonius, *Claud.*, x.; Cassius Dio, *Hist.*, lx. 1.

⁶ TI can in no case signify "Titus," for which the single letter T was invariably reserved, so as to avoid any confusion.

5. *Rev.*—Neptune standing to l., holding a dolphin on the r. hand, leaning with the l. on a trident; in the field, S C. Between the god and the letter S, same countermark, reading upwards.

As of Agrippa. [Pl. I. 5.] My Collection.

6. *Obv.*—C · CAESAR AVG · GERMANICVS PON · M · TR · POT.
Bare head of Caius Caesar (Caligula) to l. In front, same countermark, reading upwards, obliquely to l.

[*Rev.*—VESTA. Vesta seated to l.]

As of Caligula. [Pl. I. 6.] My Collection.

7. *Obv.*—GERMANICVS CAESAR TI · AVGVST · F · DIVI AVG · N. Bare head of Germanicus to l. In front, rectangular countermark, 4 mm. high, 10 mm. long, reading downwards B · CL · MP, Tib(erius) Cl(audius) Imp(erator).

[*Rev.*—C · CAESAR AVG · GERMANICVS PON · M · TR · POT, around the central letters S C.]

As of Caligula, struck in honour of Germanicus. [Pl. I. 7.] My Collection.

8. *Obv.*—Same legend and same head of Germanicus to l. In front, same countermark, reading downwards.

[*Rev.*—Similar.]

As of Caligula, in honour of Germanicus.

[Pl. I. 8.] My Collection.

9. *Rev.*—VESTA. Vesta seated to l., holding patera and sceptre; in the field, S C. Behind the goddess, same countermark, reading downwards.

As of Caligula. [Pl. I. 9.] My Collection.

As soon as Claudius was acknowledged Emperor by the Senate, he dropped his personal surname Nero Drusus, and assumed in its stead the dynastic designation Caesar Augustus, which he was entitled to claim, since he was descended from Augustus by Antonia, his mother, who was the daughter of Mark Antony and of Octavia, the

sister of Augustus. This extraction was signified by the condensed formula "Tiberius Claudius Augustus," which occurs in a similar countermark on asses of Caligula, and of others.

10. *Rev.*—Neptune standing to l., holding a dolphin and leaning on a trident; in the field, S C. Along the trident, rectangular countermark, 14 mm. high, 1 mm. long, reading downwards

TI · C · A, Ti(berius) C(laudius) A(ugustus).

As of Agrippa. [Pl. I. 10.]

My Collection.

11. *Rev.*—VESTA. Vesta seated to l.; in the field, S C. In front, same countermark, reading upwards.

As of Caligula. [Pl. I. 11.] My Collection.

12. *Rev.*—Same legend and same type. In front, same countermark, but rather larger than the latter, reading downwards.

As of Caligula. [Pl. I. 12.] My Collection.

This series of countermarked asses may be considered as a preface to the coinage of Claudius, and, theoretically, should form an integral part of it, immediately before the gold and the silver coins which exhibit the type of the praetorian barracks, with the inscription IMPER·RECEPT, in commemoration of the first hours spent by Claudius among the soldiers when they proclaimed him Emperor.

ROBERT K. MOWAT.

IV.

ROMAN CONTORNIATES IN THE HUNTERIAN COLLECTION.

(See Plates II.-IV.)

Of late years there have been marked signs of a revival of interest in those curious by-products of numismatic activity popularly known as "contorniates." No general agreement as to their true nature and purpose has yet been arrived at. Froehner's theory, which connects them with the *tabulae lusoriae*, has probably commanded the largest amount of support.¹ Quite recently, however, Dressel has thrown the weight of his authority into the opposite scale, and has expressed the opinion that they must be regarded as specifically agonistic in character.² It may be doubted whether a final settlement of this and kindred questions is at all likely to be reached until something like a complete *corpus* of the known specimens has been compiled.³ The task of preparing such a *corpus* ought not to be unduly heavy; the total number of contorniates in public and private collections cannot be

¹ See Pick, in Pauly-Wissowa's *Real-Encyclop.*, Bd. iv, 1153 f. Froehner's article appeared in *Ann. de la Soc. franç. de Num.*, 1894 (pp. 83 ff.).

² *Fünf Goldmedaillons aus dem Funde von Abukir* (Berlin, 1906), p. 60.

³ Cf. Pick, *l.c.*, 1159.

very large. And Commendatore Gneecchi has already made a good beginning.⁴ The general object in view may, perhaps, be furthered by a detailed description of the eighty-five examples in Dr. William Hunter's cabinet. It will be found that these are of considerable interest, several being unpublished. In the main the lines laid down by Gneecchi have been followed. Here and there, however, an even greater degree of precision has seemed desirable. On the other hand, so lavishly was the graving-tool employed in finishing contorniates, that it has not proved possible to say definitely that any particular piece was struck rather than cast. The order of arrangement is that given by Cohen, in his *Médailles Impériales*.⁵ Specimens not included in his second edition are marked with an asterisk. The references indicated by 'Sab.' are to Sabatier's *Description générale des Médaillons Contorniates* (Paris, 1860).

ALEXANDER THE GREAT.

- 1.—Head of Alexander r., diademed, with flying hair [= Sab., Pl. i. 1]; no symbol.
- R.—Alexander, with flying chlamys, mounted on Bucephalus, prancing l.; he leans forward and with spear held in r. thrusts at foe-man, who has fallen forward l. on r. knee and r. hand, and raises face and l. hand towards the king, while his hexagonal shield, which has slipped from his l. arm, is seen beneath the horse's body; around, from l. upwards, AL EXANDE RMAGNVS MACEDON [= Sab., Pl. xiv. 18].

Æ. 1·5 (mm. 37). ↑↑ Wt. 28·98 grammes.

⁴ *Riv. Ital. di Numism.*, viii. (1896), pp. 31 ff., and 277 ff.

⁵ That is, so far as the different groups of obverses are concerned. Within these groups, his arrangement of the reverses is disregarded.

- 2.*—Very similar type; slightly larger; beneath chin, \mathbb{E} in intaglio.⁵

R.—Bacchus, naked to waist, seated r., but with head l., in biga drawn by panthers l.; he holds thyrsus in r. and raises his l. above his head; in field r., small winged figure flying l., carrying a bunch of grapes; above backs of panthers, Maenad l., blowing double flute; in front of her, satyr, naked, standing to front, head r., with pedum in r. hand; at panthers' heads, horned Pan standing r., holding reins; in exergue, six Bacchic symbols, in following order from l. to r.: fistula, pedum, mask r. (with winged temples?), bunch of grapes, mask of Silenus l., cup with two handles.⁷ [Of. Sab., Pl. xi. 10.]

Æ. 1.45 (mm. 36). $\uparrow\downarrow$ Wt. 25.07 grammes.

The head of Alexander in the preceding group is closely imitated from one of the best known of the obverses used for the festival coins struck in Macedonia in the first half of the third century A.D.;⁸ and the same set of pieces also furnishes a parallel to the reverse of No. 1.⁹ Nor can the reverse of No. 2 be regarded as in any way original; similar Bacchanalian processions are of frequent occurrence on coins and gems, as well as upon larger works of art.

- 3.*—Head of Alexander r., wearing lion's skin; around, ALEXANDROMA GNOAVGTRPPP; in front, palm-branch incised. [Pl. II. 1.]

* The phrase, 'in intaglio,' is used wherever the depressions are wide enough to have been inlaid with silver or gold. Where they are mere scratches, 'incised' is employed instead.

⁵ These symbols are often indistinct, or only partially visible. The first successful attempt to identify them was that of C. Robert (*Étude sur les méd. cont.*, p. 39; *Rev. de la Num. Belge*, 1882, p. 364), whose description I have followed. They may vary on other examples.

⁷ Gaebler, *Die antiken Münzen Nordgriechenlands*, III. Taf. iv. 12.

⁸ *Op. cit.*, Taf. v. 3. Dressel considers the types of both contorniates and festival coins to be copied from the gold medallions (*Fünf Gold-medallions*, p. 64; cf. R. Mowat, in *Rev. Num.*, 1908, pp. 2 ff.).

R.—Male figure, wearing short chiton and hunting boots, standing r., pointing spear, which is held in both hands, at head of boar at bay l. in mouth of cave; a hound springing r. fastens fangs in throat of quarry; in background, a cypress-tree [= Sab., Pl. ix. 9].

Æ. 1.45 (mm. 37). ↑↓ Wt. 26.37 grammes.

The head on this unpublished obverse is, of course, familiar from the Macedonian festival coinage spoken of above.¹⁰ The engraver of the inscription has, however, found a new world for Alexander to conquer. Not improbably the reverse is also copied from a coin; it is directly reminiscent of the common Samian type—Androklos spearing a boar at bay in a cave.¹¹

4.—Head of Alexander r., wearing lion's skin; paws tied in front of throat; around, ALEXKAN DERMAG [= Sab., Pl. i. 6]; no symbol.

R.—Alexander on horseback, galloping r., with raised r. hand; beneath his horse's feet a lion falls forward r., his head pierced by a javelin [= Sab., Pl. ix. 11].

Æ. 1.5 (mm. 38). ↑↓ Wt. 26.37 grammes.

5.—Similar type; around, ALEXA NDER [= Sab., Pl. i. 4]; no symbol.

R.—View of the interior of the Circus Maximus; in centre of field is the *spina*, consisting of a raised platform with a *meta* at either end, and a tall obelisk rising in the middle; on this platform are visible, to l. of obelisk, a group of three pillars surmounted by dolphins, and also a statue of the Magna Mater riding upon a lion r., and, to r. of obelisk, a hunter or gladiator l. attacking a boar at bay r.; in upper part of field, two quadrigae galloping l., one behind the other, the charioteers plying the whip; in lower part of field, two quadrigae r., the one behind

¹⁰ See Gaebler, *op. cit.*, Taf. iv. 14.

¹¹ B. M. C., *Ionia*, Pl. xxxvii. 3.

galloping like those above, the one in front being reined in by charioteer, who holds palm in r. instead of whip, and looks backward to receive wreath, which is about to be placed on his head by Victory.
[Pl. II. 2.]

Æ. 1·5 (mm. 38). ↑↑ Wt. 26·88 grammes.

6.—Same; ¹² but in front, inlaid in silver, ivy-leaf downwards, with stalk.

R.—Similar.

Æ. 1·5 (mm. 39). ↑↑ Wt. 27·74 grammes.

7.—Similar [= Sab., Pl. i. 5]; in front, palm-branch in intaglio.

R.—Similar.

Æ. 1·6 (mm. 40). ↑↑ Wt. 26·79 grammes.

8.—Very similar; no symbol.

R.—Bellerophon, with flying chlamys, galloping r. on Pegasus, and piercing, with spear held in raised r., Chimaera running r. [= Sab., Pl. ix. 16].

Æ. 1·5 (mm. 38). ↑↓ Wt. 19·46 grammes.

9.—Same.

R.—Scylla attacking the ship of Ulysses; the upper part of her body, which resembles a woman, and her waist, which is girt with a ring of barking dogs, are visible above the waves; on either side, and possibly forming the other part of her body,¹³ is a huge fish with open jaws and tail in air; she holds rudder on l. arm, and with outstretched r. drags sailor from prow of vessel r.; two victims are already in the water struggling to escape the dogs and the fish; on fore part of ship, Ulysses, wearing pileus and carrying shield, striking at Scylla with spear;

¹² It will be observed that there are three grades of resemblance noted between types—'same,' 'very similar,' and 'similar.' The first of these is used only when the likeness is so great as to suggest that the pieces concerned were run in the same mould.

¹³ See *Num. Chron.*, 1906, p. 255.

behind him is another sailor, holding shield on l. arm; the shield of the man who is being dragged away has slipped from his grasp and rolled behind his companion [= Sab., Pl. xiii. 11¹⁴].

Æ. 1.5 (mm. 39). ↑↑ Wt. 27.10 grammes.

A portion of No. 9 is broken away.

The three varieties of obverse just described (Nos. 4-9) belong to a class which differs rather markedly from the portraits of Alexander most familiar on coins. After all, however, they are merely a fourth-century development of the type on which No. 3 is modelled. Of the reverses here associated with them, two (No. 4 and No. 8) are comparatively uninteresting; both are obvious imitations, the original of No. 4 being clearly one of the Macedonian festival coins,¹⁵ while No. 8 is probably modelled on a Corinthian piece of the time of Hadrian.¹⁶ The others deserve more careful scrutiny. The view of the arena on Nos. 5 ff. has a certain limited value as evidence. The general appearance of the *spina* with the *metæ* at its ends and the obelisk rising in the centre, agrees broadly with other representations on reliefs, mosaics, engraved gems, and the like. The obelisk is doubtless that now in the Piazza del Popolo. It was brought from Heliopolis and placed in the Circus Maximus by Augustus in 10 B.C., and in 357 A.D., under Constantius, it received as a companion on the *spina* the similar, but much larger, monument that stands to-day in the Piazza di S. Giovanni in Laterano. On the contorniates the obelisk is always single. But no inference as to their date would be admissible, the probability

¹⁴ Sabatier's engraving is, however, inaccurate in some details.

¹⁵ *Z. f. N.*, xxv. p. 11, No. 14.

¹⁶ *B. M. C., Corinth*, Pl. xxiii. 14.

being that the picture of the *spina* is largely conventional. The original from which the contorniate types are all, to some extent, derived, is the well-known 'first brass' of Trajan (Coh.,² ii. p. 73, No. 545), a figure of which is here given for purposes of comparison [Pl. III. 5]. It will be seen that the two *metæ*, the solitary obelisk, and the statue of the Magna Mater¹⁷ are prominent features. On the other hand, the fight with the wild boar seems to be almost peculiar to contorniates. It is certainly not on the Trajan coin, nor on the similar piece struck by Caracalla (Coh.,² iv. p. 168, No. 236).¹⁸ On the reliefs, &c., the *adricula* for the dolphins—Juvenal's *dolphinorum columnæ*—is usually indicated by two pillars supporting an architrave. On Nos. 5 ff. three can be plainly distinguished. Possibly the difference is due to an engraver who mistook for a pillar the stream of water that sometimes gushes down from the dolphins' mouths.¹⁹ Later on we shall meet with other erections, notably a building that appears to be meant for the *ovaria*, and a column surmounted by what looks like a Victory.²⁰

The reverse type of No. 9 was recently discussed in the *Chronicle* by Mrs. Esdaile (Miss K. McDowall).²¹ Its ultimate original was possibly a painting—perhaps that by Nicomachus, which Pliny the Elder mentions as

¹⁷ Described by Cohen (l.c.) as "*un cavalier*." The same statue is recognizable on many of the other representations of the *spina*; e.g. the lamp in the British Museum, and the engraved gem found in 1882 at Cilurnum (Chesters).

¹⁸ See Pl. III. 6.

¹⁹ E.g. on the mosaic at Lyons. Cf. Tertull., *De Spect.*, 8—"delphinus Neptuno vomunt." Probably the purpose was to feed the 'Euripus.' See Pauly-Wissowa's *Real-Encycl.*, iv. 2510.

²⁰ See *infra*, p. 51 and p. 43.

²¹ *Num. Chron.*, 1906, pp. 254 ff.

existing in the temple of Pax; it may be noted that on the contorniates Ulysses wears the *pileus* of which Pliny speaks.²² Although Scylla herself has assumed the hybrid shape in which she figures on the coins of Magna Graecia, the influence of the Homeric tradition can be faintly traced in other points. The hero standing armed in the prow is so far consistent with the epic version. There, however, he was gazing in awe upon Charybdis at the moment when Scylla snatched away his comrades. Here he is striking a blow in their defence. But the most characteristically Homeric touch is the tree in the background. It is obviously intended to suggest the whirlpool.

τῷ δ' ἐν ἱρινιώεῃ ἔστι μέγας, φύλλοισι τεθιγών·
τῷ δ' ὑπὸ δῖα Χάρυβδις ἀναρροιβδέει μέλαν ὕδωρ.²³

APOLLONIUS OF TYANA.

- 1.—Bust of Apollonius of Tyana r., draped and laureate; around, APOLLONI VSTEANEVS. [Pl. II 3.]
- R.—Victorious quadriga, advancing slowly to front; charioteer, who looks r., holds whip in raised r. and palm in l.; horses have palms (or plumes) on their heads; in exergue, NICA; around, from l. upwards, V F L IANE. [Cf. Sab., Pl. vi. 1.]

Æ. 1·5 (mm. 39). ♂♂ Wt. 27·58 grammes.

As this obverse is somewhat rare, and Sabatier's engraving not quite accurate, it is here reproduced. We know nothing of the reasons that led to the famous miracle-worker of the first century being admitted to the select circle of historical personages who figure on

²² Nat. Hist., xxxv. 109.

²³ Odyssey, xli. 103 L

contorniates. The portrait is interesting, for it is just possible that it may have a savour of authenticity. The same is true of the heads of Horace and of Sallust, to be described presently. The workmen who were responsible for the contorniates lacked the originality to invent such likenesses; they must have copied them, probably from gems, so that the tradition may well have its roots in truth. Sabatier's reading of the name on the reverse is supported by the Martinetti specimen.²⁴ But the additional letter visible on the Hunter example points to a corruption of AVRELIANE; the victorious charioteer is called Aurelianus in another agonistic type.²⁵

HOMER.

1.—Bust of Homer r., draped; around, WMH POC
[= Sab., Pl. vi. 3]; no symbol.

R.—Hunter attacking boar, as on ALEXANDER THE GREAT,
No. 3 [= Sab., Pl. ix. 9].

Æ. 1.4 (mm. 37). ↑↑ Wt. 20.23 grammes.

2.—Same; in front, Ε in intaglio, with traces of silver
inlay.

R.—Similar to Sab., Pl. xii. 6.²⁶

Æ. 1.45 (mm. 37). ↑↑ Wt. 22.14 grammes.

No. 2 is much rubbed.

²⁴ Sale Catalogue (1907), Pl. xlii. No. 3139.

²⁵ Sab., p. 41 (Pl. v. 3).

²⁶ The Hunter specimen is so much worn that the details are quite obscure. In these circumstances I have made no attempt at description or discussion.

HORACE.

1.—Bust of Horace l., draped; around, HORA TIVS.

B.—Groom, wearing short tunic, advancing r., looking back at horse which he leads by the bridle with r.; his l. is raised as if to hold a whip, and the horse has a palm (or plume) upon his head; around, from l. upwards, B ALSANI VS.

Æ. 1.55 (mm. 40). ↑↓ Wt. 31.13 grammes.

2.—Same; but behind, palm-branch in intaglio.

R.—Similar; but VS not visible.

Æ. 1.4 (mm. 36). ↑↓ Wt. 21.89 grammes.

[Cf. Sab., Pl. vi. 5.]

3.—Similar type; around, ORAT IVS.

R.—The poet Accius, draped, seated r.; his r. hand rests on his r. knee, while his l. holds the upper end of a parchment roll, the lower end of which is supported by his l. knee; around, ACC IVS.

Æ. 1.4 (mm. 35). ↑↓ Wt. 23.25 grammes.

[Sab., Pl. xv. 6.]

No. 3 is much rubbed.

No. 1 is interesting, as giving (for the first time, so far as I know) the full form of the name on the reverse.

SALLUST.

1.—Bust of Sallust r., draped; head bare; around, from l. upwards, SALVSTI VSAVTOR. [Cf. Sab., Pl. vii. 12.²]

²² On Nos. 1 f. there is a distinct suggestion of a slight beard.

R.—Group of three figures, wearing togas, all standing to front; the one on the extreme r. looks l. and stretches out his r. hand as if expostulating with his companions, both of whom look towards him; the figure in the centre holds small organ in l. and the one on the extreme l. holds flute in r.; around, from l. upwards, PETRONI PLACEAS [= Sab., Pl. x. 4].

Æ. 1·5 (mm. 37). ↑↑ Wt. 22·70 grammes.

2.—Same; but behind, Ξ incised.

R.—Very similar.

Æ. 1·55 (mm. 39). ↑↑ Wt. 24·48 grammes.

No. 2 has once been plated with silver.

3.—Very similar; but behind, a wreath (?) incised.

R.—Very similar.

Æ. 1·5 (mm. 38). ↑↑ Wt. 22·24 grammes.

4.—Same; no symbol.

R.—Sol, draped and wearing radiate crown, driving to front in galloping quadriga, with r. hand raised and globe held in l.; beneath horses' feet, salamander l. [= Sab., Pl. xi. 13].

Æ. 1·5 (mm. 39). ↑↑ Wt. 27·48 grammes.

5.—Same; but in front, ivy-leaf downwards, inlaid in silver.

R.—Same.

Æ. 1·5 (mm. 38). ↑↓ Wt. 24·35 grammes.

AUGUSTUS.

1.*—Head of Augustus r., laur.; around, from l. upwards, DIVVS AVGVSTVSPATER [= Sab., Pl. iii. 14]; no symbol.

B.—View of the Circus Maximus from the Palatine; the side next the spectator has the appearance of a long colonnade, resting on a stylobate approached by three steps; on l. the colonnade bends away to form the rounded south-east end of the enclosure; above the central portion of the entablature is visible the *spina*, with the obelisk of Augustus and the *metae*; the two extremities rise into what look like square towers, each surmounted by quadriga facing inwards; on inner side of r. hand tower, arched door. [Pl. II. 4.]

Æ. 1·4 (mm. 36). ↑↑ Wt. 18·39 grammes.

2.—Same; in front, ♂ incised.

B.—Circular enclosure, with battlemented barricade; in the centre, a tree; in front, a stag and a goat running r., side by side, pursued by a dog; behind, a second dog also r., pressing hard upon a hare [= Sab., Pl. ix. 3].

Æ. 1·4 (mm. 36). ↑↑ Wt. 23·57 grammes.

The reverse type of No. 2 is incised. That of No. 1 differs in some respects from the engraving of Sabatier, to which it most closely corresponds (Pl. iii. 1). The view of the Circus is obviously modelled on the earlier representations on coins;²³ but there are certain peculiarities that call for remark. The curve at the south-east end is an attempt to break away from convention. The square tower on the l. may be meant for the upper portion of the triumphal arch in honour of Titus, through which the victorious chariots passed out of the enclosure. That is, at all events, the inference one would draw from a comparison with the 'first brass' of Trajan, although on the 'first brass' of Caracalla the corresponding

²³ See *supra*, p. 24 f., and Pl. III. 5 and 6. There is a valuable discussion of these types by Friedländer in *Abh. der Königl. Akad. der Wissensch. zu Berlin*, 1873, pp. 67 ff.

structure seems to rise straight from the entablature. It is less easy to account for the square tower on the r. On the Trajan coin there is a *facing* quadriga on this side, evidently shown in perspective, as if at some distance. It reappears on the coin of Caracalla, where its position is clearly beyond the *carceres*,—that is, next the Aventine. Possibly in the case of No. 1 a desire for symmetry has led to this quadriga, with its pedestal, being brought forward and so treated as to balance the upper portion of the triumphal arch upon the l. This suggestion seems to be supported by the arched door, for a similar opening will be found in the structure on the l. on the coin of Caracalla.

NERO.

- 1.*—Head of Nero r., winged, as Mercury; behind and beneath neck, incised lines, waved to represent drapery; in front, incised in outline, a caduceus, with rows of dots punctured along the bodies of the snakes; behind, also incised in outline, $\overline{\text{E}}$; border of dots.

R.—Mars, wearing crested helmet, standing three-quarter face towards r., leaning with r. on spear and supporting with l. a shield which stands on ground beside him; mantle and tunic indicated by faintly incised lines; border of dots.

Æ. 1·4 (mm. 36). $\uparrow\downarrow$ Wt. 27·39 grammes.

[Pl. II. 5.]

- 2.*—Head of Nero r., as Hercules; club over l. shoulder; in front, $\overline{\text{E}}$ incised in outline; border of dots, punctured.

R.—Naked (? female) figure seated r., with knees drawn up and r. hand resting on hip; l. hand grasps long staff or pole which lies on knees and projects forward across the whole field; in the background, traces of

a building (? or of a vessel with rowers); near the margin, obscure incised lines (? traces of inscription).

Æ. 1.45 (mm. 37). $\uparrow \rightarrow$ Wt. 17.29 grammes.

[Pl. II. 6.]

3.*—Very similar, but in front, indicated by punctured dots, bunch of grapes with leaves; border of dots, punctured.

R.—In foreground, lion kneeling l. and looking back; behind, standing to front, draped (? female) figure holding in outstretched r., above head of lion, a circular object; similar object in l.; border of dots, punctured.

Æ. 1.45 (mm. 37). $\uparrow \rightarrow$ Wt. 22.40 grammes.

[Pl. III. 1.]

These three unpublished pieces form a somewhat remarkable group. No. 1 stands rather apart from its fellows, being of decidedly superior workmanship. On the other hand, there is undoubtedly a close connexion between the obverses of No. 2 and No. 3. And the reverse types of both are equally hard to explain. The blinding of Polyphemus seemed at one time to promise a possible interpretation of No. 2. But the suggestion proved difficult to work out in detail. Another idea was that it might represent some such athletic feat as appears on Sab., Pl. viii. 1, 2, and 14. Again, however, there are features that seem inconsistent with the hypothesis; in particular, one would have expected to find the r. hand grasping the pole firmly.

4.—Head of Nero r., laur.; around, NEROCLAUDIVS-CAESARAVGGER PMTRPIMPPP; in front, palm-branch in intaglio. [Cf. Sab., Pl. ii. 6.]

R.—Victorious charioteer, with palm in l. and whip and wreath (?) in r., driving quadriga slowly r., and looking behind him; horses have palms (or plumes)

on their heads ; no inscription visible, but surface much worn ; in exergue, traces of palms (?). [Cf. Sab., Pl. v. 10.]

Æ. 1·35 (mm. 35). ↑↑ Wt. 21·14 grammes.

5.—Very similar ; head slightly larger [= Sab., Pl. ii. 6] ; same symbol.

R.—Huntsman attacking boar, as on No. 3 of ALEXANDER THE GREAT [= Sab., Pl. ix. 9].

Æ. 1·5 (mm. 38). ↑↓ Wt. 21·63 grammes.

Contorniates with the head of Nero show at least eleven varieties of inscription. The commonest of these is IMPNEROCAES ARAVGPMAX, which we shall find on Nos. 11 ff. Next in order of popularity is that which occurs on Nos. 6 ff. They are distinguished from the immediately preceding set by having the spelling CLADIVS for CLAUDIVS.²⁹

6.—Head of Nero r., laur. ; around, NEROCLADIVS-CAESARAVG GERPMTRPIMPPP ; in front, palm-branch in intaglio.

R.—Rape of the Sabine women ; the scene of the incident is indicated by a *meta* rising in the background ; on either side of the *meta* a group of five figures, consisting of Sabine women fleeing with outstretched hands, and being seized from behind by Roman youths ; in exergue, SABINAE [= Sab., Pl. xv. 5].

Æ. 1·3 (mm. 34). ↑↑ Wt. 17·10 grammes.

The comparatively small size of No. 6 is due to the characteristic edge having been removed.³⁰ There are traces of gilding on the obverse.

²⁹ The variety with CLADIVS is not noted by Sabatier, Cohen, or Gnechi. Yet it is much more usual than the other. Here the proportion is 2 to 1. In the British Museum it is even greater, being at least 5 to 2.

³⁰ The same reduction has taken place in the case of the specimen illustrated by Sabatier, *l.c.*

7.²—Same; but in front, Ξ incised in outline.

R.—Alexander the Great on horseback galloping r., with flying cloak and r. hand raised in air; at horse's feet, lion rushing l., pierced with javelin [= Sab., Pl. ix. 13].

Æ. 1.3 (mm. 33). $\uparrow\uparrow$ Wt. 20.40 grammes.

The size of No. 7 has been reduced in similar fashion to that of No. 6.

8.—Same; but Ξ incised.

R.—The Emperor, laur. and wearing cuirass, with paludamentum flying behind, on horseback r., thrusting with spear at foeman, who sinks back beneath horse's feet, holding sword in lowered r. and shield on l. arm [= Sab., Pl. xvi. 14].

Æ. 1.5 (mm. 38). $\uparrow\downarrow$ Wt. 25.10 grammes.

9.—Same.

R.—Similar type; details varied; figure of foeman larger in proportion; exergue hardly visible. [Pl. III. 2.]

Æ. 1.4 (mm. 36). $\uparrow\uparrow$ Wt. 18.68 grammes.

The reverse of No. 7 closely resembles that of ALEXANDER THE GREAT, No. 4. Similarly, the reverse type of Nos. 8 f. is essentially the same as that of ALEXANDER THE GREAT, No. 1, but for the laurel-wreath, which seems to point to the Emperor.


10.—Head of Nero r., laur.; face thin; likeness not recognizable; around, IMPNEROCAESARAVGPMX [= Sab., Pl. ii. 1]; in front and behind, incised lines, possibly indicating palms.




R.—View of the interior of the Circus Maximus, showing *spina*, with obelisk and *metae*, as on Nos. 5 ff. of ALEXANDER THE GREAT; but to l. of obelisk, statue of Magna Mater upon lion l., and small building consisting of group of pillars with conical roof, and to r. of obelisk, the 'dolphins' and a lion bounding

l.; in the arena four quadrigae racing, the two on the farther side l. and the two on the nearer side r.; in each case the charioteer in front looks back; between the *spina* and the two farther chariots, hare l., pursued by hound; beyond each *meta*, traces of figures, the one on the r. being mounted [= Sab., Pl. iii. 4].

Æ. 1.4 (mm. 36). ↑↓ Wt. 29.95 grammes.

This reverse type is an interesting variation of that of ALEXANDER THE GREAT, Nos. 5 ff.

11.—Similar type; features less thin; around, IMPNERO-CAESARAVGPMAX [cf. Sab., Pl. ii. 2]; in front,  in intaglio.


R.—Victorious charioteer driving quadriga to front; he looks r., and holds whip in raised r. and palm in l.; in exergue,   . [Cf. Sab., Pl. iii. 13.]

Æ. 1.45 (mm. 37). ↑↓ Wt. 21.99 grammes.

12.—Same; same symbol.

R.—Olympias, draped and veiled, seated l. on couch, extending r. hand towards mouth of crested serpent, which rears its head r.; in exergue, REGINA. [Cf. Sab., Pl. xiv. 15.]

Æ. 1.5 (mm. 38). ↑↑ Wt. 21.05 grammes.

13.—Same; but  rudely cut.

R.—Roma, wearing crested helmet, seated l. on rock, against which shield rests; she grasps parazonium with l. hand, and holds on extended r. small Victory r., on globe, with wreath; in field, S C. [Cf. Sab., Pl. xvii. 13.]

Æ. 1.5 (mm. 38). ↑↑ Wt. 21.73 grammes.

14.—Same; but in front, palm-branch in intaglio.

R.—Faustina, draped and wearing stephane, standing l., extending with r. a patera over a flaming altar; around, DIVAFAVS TINAAVG. [Cf. Sab., Pl. xvii. 14.]

Æ. 1.45 (mm. 37). ↑↓ Wt. 27.05 grammes.

15.*—Same ; no symbol.

R.—Ten concentric circles, described about a central dot.

Æ. 1·5 (mm. 38). Wt. 21·50 grammes.

The reverse of No. 12 presents us with another type to which a parallel can be found in the Macedonian festival coinage.³¹ The reverses of Nos. 13 f., neither of which is quite accurately reproduced by Sabatier, are both copied from common Roman bronze coins. No. 11 has often been published before ; but the reading of the monograms here given is (I think) new, being the result of the comparison of a number of specimens. The first of them obviously embodies a name like 'Tiberius ;' it is worth noting that an almost identical monogram occurs, incuse and retrograde, behind a charioteer on Sab., Pl. vi. 11. The precise form and the interpretation of the second monogram are more doubtful.

16.—Similar type, with rather stouter face ; same inscription ; in front, palm-branch in intaglio.

R.—Victorious charioteer, head l., driving quadriga to front ; horses have palms (or plumes) upon their heads ; in exergue, wreath between two palms ; above, E VT V MIVS. [Cf. Sab., Pl. iv. 9.]

Æ. 1·4 (mm. 36). ↑↑ Wt. 21·50 grammes.

17.—Very similar type ; same inscription (only partly visible) ; no symbol.

R.—Groom walking r., looking back towards saddled horse, which he leads by the bridle [= Sab., Pl. vi. 3].

Æ. 1·45 (mm. 37). ↑↑ Wt. 22·99 grammes.

³¹ Cf. Gaebler, *Die antiken Münzen Nordgriechenlands*, III. Taf. iv. 35.

18.—Very similar; but in front, Ξ in intaglio.

R.—Jason, with flying chlamys, standing to front, head r.; on each side of him, bull struggling to escape the grasp he has laid upon one of its horns; in exergue, plough r. [Cf. Sab., Pl. xiii. 3.]

Æ. 1.4 (mm. 36). $\uparrow\downarrow$ Wt. 22.55 grammes.

No. 18 is pierced.

19.—Same; but in front, palm-branch inlaid in silver.

R.—Hercules l., grasping with l. hand l. fore foot of centaur r., and holding raised club in r.; the centaur looks back at his opponent, and raises both hands deprecatingly; in the background, a tree [= Sab., Pl. xiii. 7].

Æ. 1.35 (mm. 35). $\uparrow\uparrow$ Wt. 15.35 grammes.

20.—Same; no symbol.

R.—Olympias seated on couch, with serpent, as on No. 12; exergue, blank.

Æ. 1.45 (mm. 37). $\uparrow\downarrow$ Wt. 24.10 grammes.

21.—Same; but in front, palm-branch incised.

R.—Emperor on horseback r., laur. and wearing military dress, with flying cloak, spearing foeman, who sinks backward with shield on l. arm and r. hand raised to protect himself; beyond, a second foeman, already dead, lying prone l., beneath horse. [Cf. Sab., Pl. xvi. 13.]

Æ. 1.4 (mm. 36). $\uparrow\uparrow$ Wt. 22.57 grammes.

22.—Same; but in front, Σ in intaglio.

R.—Similar.

Æ. 1.45 (mm. 37). $\uparrow\uparrow$ Wt. 19.56 grammes.

The interpretation of the reverse type of No. 18 as Jason is certainly correct.²² The subject of the reverse

²² See *Num. Chron.*, 1906, p. 254. It had previously been given by Seeliger, in Roscher's *Lexicon*, ii. p. 81.

type of No. 19 was also a popular one. It occurs, for instance, on Roman bronze coins struck as early as the first half of the third century B.C.³³

23.—Similar; but in front, palm-branch in intaglio.

R.—Laocoon, naked but for mantle flying behind, standing to front, with head r. and hands uplifted; before him, his two young sons, also naked; all three are struggling to escape from the coils of the serpents which issue from the sea, indicated by waves on l. [= Sab., Pl. xiv. 11].

Æ. 1.45 (mm. 37). ↑↑ Wt. 20.20 grammes.

24.—Same; no symbol.

R.—Apollo, wearing long robe, seated r. on rocks, supporting his chin on his l. hand; before him, Marsyas, naked, standing l. beside a tree, his hands tied behind his back; on extreme r., a Scythian slave, kneeling r. and looking backwards as he sharpens a knife. [Cf. Sab., Pl. xix. 9.]

Æ. 1.45 (mm. 37). ↑↓ Wt. 23.97 grammes.

25.—Same; in front, palm-branch incised.

R.—Similar.

Æ. 1.45 (mm. 37). ↑↑ Wt. 22.27 grammes.

26.—Same.

R.—Similar.

Æ. 1.5 (mm. 39). ↑↓ Wt. 18.29 grammes.

27.—Same; no symbol.

R.—Blank.

Æ. 1.45 (mm. 37). Wt. 18.59 grammes.

The representation of Laocoon and his sons on No. 23 is interesting, but calls for no special remark. The

³³ Babelon, *Monnaies de la Republique romaine*, i. 18.

Marsyas group is discussed by Mrs. Esdaile, in *Num. Chron.*, 1906, p. 263.

VESPASIAN.

1.—Head of Vespasian r., laur.; around, IMPCAESVES-PASIANAVGCOSIII; in front, E in intaglio, with traces of silver inlay.

R.—Huntsman attacking boar, as on No. 3 of ALEXANDER THE GREAT [= Sab., Pl. ix. 9].

Æ. 1.4 (mm. 37). ↑↑ Wt. 23.64 grammes.

TRAJAN.

1.—Bust of Trajan r., laur., wearing cuirass; paludamentum fastened across chest; around, IMPCAES-TRAIANVSAVGPMPPPROCONS [= Sab., Pl. ii. 13].

R.—Aeneas, wearing short tunic and flowing mantle, running r., glancing backwards; on his l. shoulder he carries Anchises, who also looks back, waving his hand, as if urging some one to follow; alongside, his l. hand in his father's r., Ascanius, wearing trousers, tunic, and Phrygian cap; around, AEN EAS [= Sab., Pl. xiv. 10].

Æ. 1.5 (mm. 39). ↑↓ Wt. 27.85 grammes.

There are traces of gilding on both sides of No. 1.

On contorniates the head of Trajan ranks second only to the head of Nero in popularity, and there is greater variation in the way it is represented, as well as in the form of the inscription by which it is accompanied. At least twelve different legends might be noted. The fact that more than half of these are in the dative faithfully reflects the fashion prevalent on the Emperor's coins. The artist of the reverse of No. 1 would not lack for models. The flight of Aeneas occurs as a coin-type at Aeneia in Thrace as early as the sixth century B.C.,

and it does similar service at several cities, including Rome itself, during the Imperial age.

2.*—Similar type, with breast turned slightly more towards the front; around, *TRIANVSAVG COSIIIP*; in front, *E* incised.

R.—Cybele, draped and wearing mural crown, seated in quadriga of lions galloping r.; she leans with r. on sceptre; beyond her, Atys standing, draped and wearing Phrygian cap; he holds pædum in l., and looks back at Cybele. [= Sab., Pl. xi. 6.]

Æ. 1·5 (mm. 39). ↑↑ Wt. 23·64 grammes.

3.—Very similar; in front, palm-branch incised.

R.—Similar.

Æ. 1·4 (mm. 36). ↑↑ Wt. 21·83 grammes.

There are traces of gilding on the reverse of No. 3.

The reverse type of Nos. 2 f. is fairly common.²⁴ Its appearance on contorniates may possibly have an agonistic significance; we have seen that the statue of the Magna Mater was a prominent feature on the *spina* of the Circus Maximus. The obverse of No. 2 is highly interesting,—not because of its type, which is no way remarkable, but because of the symbol, which settles once for all the true interpretation of P in the much-discussed combination *E*. Here its place is taken by a palm-branch. The inference that it represents *palma*, and not *præmia*, is irresistible.

4.*—Bust of Trajan r., laur., wearing cuirass and paludamentum; back shown; around, *TRIANVS COSIIIP*; in front, *E* in intaglio. [Cf. Sab., Pl. ii. 8.]

R.—Alexander the Great on horseback r., in military dress, with flying cloak, spearing foeman, whom he

²⁴ See Robert, *Les phases du mythe de Cybele et d'Atys rappelés par les médaillons contorniates* (Rev. Num., 1885, pp. 33 ff.).

tramples beneath his horse's fore feet; foeman, who wears helmet or cap, has sunk down on l. knee, holds shield on l. arm, and raises r. hand towards r. shoulder. [Cf. Sab., Pl. xvi. 14.]

Æ. 1·5 (mm. 40). ↑↑ Wt. 25·46 grammes.

5.—Head of Trajan r., laur.; small portion of paludamentum visible over front of neck; around, *TRAIANVS AVG COS · IIII · PP ·*; in front, palm-branch in intaglio.

R.—Female figure, draped, standing r., clasping with r. the r. hand of youth who stands to front, before her, dressed in conventional Phrygian costume; her l. hand rests on his shoulders, while his l. hand (in which he seems to be holding something) is by his side. [Pl. III. 3.]

Æ. 1·5 (mm. 40). ↑↑ Wt. 27·08 grammes.

The inscription on the preceding piece is the commonest of all the forms of legend found with the head of Trajan on contorniates.⁶⁵ The reverse type of No. 5 is of doubtful interpretation. It was first published in 1879 by Robert, who described it as Cybele and Atya.⁶⁶ Six years later he reproduced it in an engraving, where the female figure is shown wearing a mural crown.⁶⁷ On the supposition that the engraving was accurate, there could hardly be a doubt as to the correctness of Robert's interpretation. But there is no trace of a crown on the Hunter specimen. It is true that this is in poor condition. At the same time, the negative evidence it provides

⁶⁵ It may be noted in passing that it is this, and not the name of Nero, that is on the obverse of the very interesting contorniate in the B. M., figured in *Num. Chron.*, 1906, Pl. XVII. 2. It is worth adding that the reverse of that piece has also an inscription, which has not been noticed hitherto, but which, if it could be deciphered, might furnish a clue to the type.

⁶⁶ *Catalogue des méd. contorniates*, p. 6.

⁶⁷ *Rev. Num.*, 1885, Pl. iv. 1.

is fully borne out by the fine example in Commendatore Gneccchi's collection.³⁸ Gneccchi, who believed the type to be unpublished, suggested that it might be possible to see in it a representation of the parting of Hector and Andromache—a view that seems considerably less probable than Robert's.

6.—Very similar ; second half of inscription partly illegible ; no symbol.

R.—Blank.³⁹

Æ. 1.5 (mm. 40). Wt. 25.48 grammes.

There are traces of gilding both on obverse and on reverse.

7.—Similar, with TOS for COS.

R.—View of the Circus Maximus from the Palatine ; the long colonnade, which forms the side next the spectator, rests upon a stylobate approached by a flight of three steps, on the lowest of which stand two figures face to face at a little distance from one another, each stretching out r. hand ; above l. extremity of colonnade rises an arch surmounted by a quadriga driven r. by winged charioteer ; at r. extremity of colonnade is a high portico, within which a tall statue facing ; above the portico, in crude perspective, can be seen the *carceres*, from which issues a quadriga at full gallop l., the horses with palms upon their heads ; above the *carceres* is the judge's box, and beyond them, at the end of this side of the Circus, is a high structure, corresponding to and resembling the portico, but surmounted by a quadriga facing ; in the background is shown the inner side of the Circus, with shrine in l. hand corner and places for spectators on either side of it ; above central portion of colonnade the *spina* is indicated by the obelisk and the *metae*,

³⁸ *Appunti*, xxxv. p. 28 (*Riv. Ital. di Num.*, 1895).

³⁹ It is possible, but not probable, that there may once have been a type. The surface is covered with a metallic accretion.

while there are also visible upon it, to r. of obelisk, a statue standing on a pillar, with raised r. hand, and what may be the *aedicula* for the dolphins.
[Cf. Sab., Pl. iii. 6.]

Æ. 1.5 (mm. 39). ↑↓ Wt. 22.67 grammes.

8.—Similar, with TRAIANVS · AVG COS · IIII · PP; paludamentum not visible; in front, P incised in outline.

R.—Similar.

Æ. 1.45 (mm. 37). ↑↓ Wt. 20.40 grammes.
[Pl. III. 4.]

The view of the Circus on Nos. 7 f.—not very accurately reproduced by Sabatier—is one of the most interesting of the group of types to which it belongs. It introduces some features which we have not met with before upon contorniates. As a matter of fact, it is closely modelled upon the coins, more particularly the coin of Caracalla [Pl. III. 6]. The arch on the l. is probably meant to indicate the *Porta Triumphalis*, through which the winning chariots passed out of the arena, while the shrine in the background is possibly the *Sacellum Murciae*.⁴⁰ The two figures standing on the steps are, however, a novelty, and so is the statue within the portico on the r. The statue on the column may be a Victory.

9.—Same; P in intaglio.

R.—Bacchus, naked but for mantle over shoulders, standing to front, head l., holding cantharus in lowered r. and leaning with l. on thyrsus; at his feet l., panther seated l., looking back at him and raising its l. fore paw; to l. a small Maenad, fully draped, running l., playing the double flute; to r. a small Pan running r. looking back, with pedom in r. and bunch of grapes in l.; in field above, to l. and to r., two other Bacchic figures, details of which are obscure. [Cf. Sab., Pl. xi. 7.]

Æ. 1.4 (mm. 36). ↑↓ Wt. 24.92 grammes.

⁴⁰ See, for details, the paper by Friedländer, cited p. 30, *supra*.

- 10.—Similar; no dots between letters of inscription; in front, Ξ incised in outline.
- B.—Victorious quadriga, advancing slowly to front; charioteer, who looks l., holds wreath and whip in raised r. and palm in l.; no palms upon horses' heads; exergue blank; around, from l. upwards, D OM · N · N S. [Cf. Sab., Pl. iii. 10.]
Æ. 1·4 (mm. 38). $\uparrow\downarrow$ Wt. 21·70 grammes.
- 11.—Similar type; around, TRAIAN VSPPAVG [= Sab., Pl. ii. 11]; no symbol.
- R.—Cybele and Atys in quadriga, as on Nos. 2 f.
Æ. 1·35 (mm. 35). $\uparrow\downarrow$ Wt. 21·72 grammes.
- 12.—Very similar; in front, Ξ in intaglio.
- R.—Minerva, draped and helmeted, standing r., supporting shield with l. hand and spear on l. arm; she lays her r. on shoulder of Hercules, who stands l., naked, raising his r. arm and leaning with his l. on club; lion's skin over l. arm. [Cf. Sab., Pl. xiii. 1.⁴¹]
Æ. 1·4 (mm. 36). $\uparrow\downarrow$ Wt. 26·30 grammes.
- 13.—Very similar; in front, Ξ in intaglio.
- R.—Olympias with serpent, as on Nero, No. 12; back of couch is formed like dolphin downwards; around, from l. upwards, OL I M P I A S; in exergue, RAGENA. [Cf. Sab., Pl. xiv. 14.]
Æ. 1·4 (mm. 35). $\uparrow\uparrow$ Wt. 20·36 grammes.
- 14.—Bust of Trajan l., laur., wearing cuirass and paludamentum; back shown; around, IMPCAESNERVAE-TRAIANOAVGGERDACPMTRPCOSIII [= Sab., Pl. ii. 9].
- R.—Warrior, wearing crested helmet, charging r.; he holds spear in r. and carries on l. arm and in l. hand round shield and scaling-ladder; his l. foot, which is slightly in advance, is planted upon doubtful object.
Æ. 1·5 (mm. 38). $\uparrow\uparrow$ Wt. 21·44 grammes.

[Pl. III. 7.]

⁴¹ For a much more accurate reproduction, see Robert, *Étude sur les médailles contorniates*, Pl. i. 2 (*Rev. de la Num. Belge*, 1882, Pl. v. 2).

Neither of Sabatier's reproductions of the interesting reverse type of No. 14 is quite accurate.⁴² He failed to recognize the scaling-ladder, and accordingly he describes the figure once as a *retiarius* with a trident, and again as a Roman soldier with a standard.⁴³ As a matter of fact, the type is clearly copied from the reverse of a rare coin of Bizya, where the hero—who is probably Capaneus—has his l. foot planted on a *vexillum*.⁴⁴ Eckhel, who describes the warrior as Mars, long ago drew attention to the resemblance between coin and contorniate.⁴⁵

15.—Same; but behind, ♀ in intaglio.

R.—Bacchus in biga of panthers l., with attendants; in exergue, symbols; all as on No. 2 of ALEXANDER THE GREAT.

Æ. 1.5 (mm. 39). ↑↑ Wt. 25.60 grammes.

16.*—Bust of Trajan r., laur., wearing cuirass and paludamentum; around, DIVONERVAE TRAIANO AVG. [Cf. Sab., Pl. ii. 17.]

R.—Naked warrior, wearing crested helmet, standing r.; he holds spear in l. and supports with r. the fore part of a female centaur, who falls forward r., as if wounded, her two arms hanging limp towards the ground; she wears an Amazon's cap upon her head, and beyond her l. arm are traces of a *pelta*.

[Pl. III. 8.]

Æ. 1.45 (mm. 37). ↑↑ Wt. 20.46 grammes.

The reverse of No. 16 is very curious. It has been formed from the better known type of Achilles and Penthesilea (Sab., Pl. xiv. 6), by tooling away the horse's head and neck and the lower half of the body of

⁴² *Op. cit.*, Pla. viii. 12 and xix. 15.

⁴³ *Op. cit.*, pp. 61 f. and 129 f.

⁴⁴ *Greek Coins in the Hunterian Collection*, l. p. 438, No. 3.

⁴⁵ *Doctrina*, viii. p. 285.

Penthesilea. Horse and Amazon are thus combined to form a female centaur. The round shield of Achilles has disappeared in the process, and so has much of the *pelta* of the Amazon. The Hunter example is not a solitary freak. In the British Museum there is a rather smaller piece which has been treated in the same way;⁴⁶ it has a head of Pius on the obverse. Further, it cannot be doubted but that we have here the explanation of an eighteenth-century puzzle. Eckhel, founding on Morelli, thus describes the reverse of a contorniate with the head of Nero on the obverse:—

"AGIT SPE TESEVS *Theseus galeatus nudus stans cum hasta et clypeo Centaurum Iyram tenentem admota collo manu in genua procumbere cogit.*"

After discussing the type, he adds: "*Quis sit sententiae juxta scriptae sensus, et quo pacto cum hoc Thesei facto colliganda, inquirant alii.*"⁴⁷ A glance at Morelli's engraving is sufficient to show that his group is identical with that upon No. 16 above. As for the inscription, it may well be questioned whether it ever had any sense at all. "AGIT SPE TESEVS" is almost certainly either a misreading or a meaningless alteration of the "ACHILLIS PENTESILEA," which sometimes accompanies the original design.

17.—Head of Trajan r., laur.; paludamentum visible above truncated neck, in front; around, DIVONERVA ETRAIANO; likeness poor; casting coarse. [Cf. Sab., Pl. ii. 16.]

⁴⁶ The transformation, however, is not quite so complete. The head and neck of the horse are entirely removed, but the lower part of Penthesilea's body still remains.

⁴⁷ *Doctrina*, viii. p. 286. The reference to Morelli is *Thes. Imp.*, ii. p. 93, No. 45. Cohen (*Méd. imp.*, viii. p. 296) thinks the piece figured by Morelli must have been a modern forgery.

R.—View of the interior of the Circus Maximus, as on No. 5 of ALEXANDER THE GREAT [= Sab., Pl. iii. 5].

Æ. 1·5 (mm. 39). ↑↓ Wt. 31·25 grammes.

18.—Very similar; but around, DIVONERVAE TRAIANO.

R.—Scylla attacking the ship of Ulysses, as on No. 9 of ALEXANDER THE GREAT. [Cf. Sab., Pl. xiii. 11.]

Æ. 1·5 (mm. 38). ↑↓ Wt. 25·46 grammes.

19.—Head of Trajan r., laur.; around, DIVONERVAE TRAIANO; better work.

R.—Similar type, slightly varied in some of its details. [Cf. Sab., Pl. xiii. 13.]

Æ. 1·6 (mm. 41). ↑↓ Wt. 32·13 grammes.

20.—Bust of Trajan r., laur., wearing cuirass; paludamentum fastened across chest, which is shown; around, DIVOTRAIA NOAVGVSTO; in front, palm-branch incised; behind, B²B incised. [Cf. Sab., Pl. ii. 18.]

R.—Apollo, naked but for laurel-wreath, standing l., holding filleted laurel-branch in extended r.; with his l. arm he supports his lyre, which rests upright on a tripod; around centre leg of tripod, a serpent. [Cf. Sab., Pl. xi. 11.]

Æ. 1·65 (mm. 42). ↑↑ Wt. 31·07 grammes.

21.—Similar; style rather better; no symbol, and no monogram. [Cf. Sab., Pl. ii. 20.]

R.—Two draped figures standing to front; between them, object resembling an organ; details obscure. [Cf. Sab., Pl. x. 7.]

Æ. 1·45 (mm. 36). ↑↑ Wt. 27·73 grammes.

22.—Bust of Trajan r., laur., wearing cuirass; paludamentum fastened across chest; later style, showing more of body; around, DIVOTRAIA NOAVGVSTO. [Cf. Sab., Pl. ii. 19.]

R.—Vulcan, bearded, wearing round cap and sleeveless tunic, seated r., his r. arm resting on the back of his chair; he stretches out his l. hand as if to show a round shield placed on a stand before him; it may be the newly finished shield of Achilles; in the centre of it, within a circle, are the heads of Sol r. and Luna l., face to face, while in compartments round the circle are the twelve signs of the Zodiac; behind Vulcan's chair, parazonium; in the background, on a pedestal, statue of Minerva, helmeted, l., leaning with r. on spear. [= Sab., Pl. xii. 4.]

Æ. 1·65 (mm. 42). ↑↑ Wt. 31·16 grammes.

23.*—Very similar.

R.—Three concentric circles described round a dot.

Æ. 1·5 (mm. 38). Wt. 23·38 grammes.

ANTINOUS.

1.*—Bust of Antinous r., as Pan, with pedum over l. shoulder; chest shown; around, from l. upwards, ANTIN OΩ TIANI.

R.—Figure wearing short, sleeved tunic, running l., raising both hands, as if surprised; the whole in intaglio; round about, a deep circle incised.

Æ. 1·5 (mm. 38). ↑↓ Wt. 22·92 grammes.

[Pl. IV. 1.]

Contorniates with the head of Antinous are rare in any case, and the present example is also interesting as adding to the very limited number of known contorniates with one or both types in intaglio.⁴⁸ The reverse type is very curious; it suggests a scene from a drama, possibly a comedy. It may be noted that, instead of the raised edge which Gneecchi remarks as characteristic of these pieces, it has the usual deep circle as a border.

⁴⁸ See Gneecchi, *Appunti*, xxxv. (*Riv. Ital. di Num.*, 1895), pp. 5 ff., for a list of the seven hitherto recorded.

ANTONINUS PIUS.

1.*—Head of Antoninus Pius r., laur.; details of hair and beard incised.

R.—Quadriga galloping r.; driver, who leans forward, seems to be supporting some object on his r. arm; details incised.

Æ. 1·45 (mm. 37). ↑↓ Wt. 36·09 grammes.
[Pl. IV. 2.]

This piece presents a peculiar appearance owing to the extent to which the graving-tool has been employed in its production. It is just possible that the reverse may be intended for Pluto carrying off Proserpina—a type that is comparatively common on Greek coins of the Imperial age.

2.—Bust of Antoninus Pius r., bare-headed, wearing cuirass and paludamentum, the latter fastened across chest, which is shown; around, ANTONI NVS PIVS.

R.—Male figure, wearing short tunic, standing r., grasping with both hands a long pole with which he is apparently trying to detach fruit from tree; the spreading branches of the tree fill a large part of the upper portion of the field; on l. of trunk a series of parallel lines rises r. from the ground at an angle of about 45°; to r. of trunk are visible the head and neck of a crested serpent l.; around, from l. upwards, SABVCIVSPINIAN - - -

Æ. 1·7 (mm. 43). ↑↓ Wt. 35·89 grammes.
[Sab., Pl. xiii. 16.]

The head on the obverse of this and of the companion piece (with Ulysses and the ram of Polyphemus) is usually called Caracalla. But there is nothing whatever that is characteristic of Caracalla about it, while the general cast of the features is distinctly reminiscent of

Pius.⁴⁹ No satisfactory explanation of the reverse type has yet been offered, nor do I know any specimen from which the unintelligible inscription can be completed. But it is hardly possible to doubt that, as was long ago suggested, the scene depicted has some connexion with the myth of the Hesperides.

FAUSTINA SENIOR.

1.—Bust of Faustina Senior l., draped, veiled, and wearing stephane; hair gathered in knot on top of head; around, DIVA AVGVSTA FAVSTINA; in front, in intaglio, horse l., with fore foot raised, and palm (or plume) on head.

B.—Cybele, draped and wearing turreted crown, seated r. at the top of a flight of steps just within the entrance to a temple, with a lion on either side of her; she holds tympanum on l. knee, and her feet rest on a footstool; four columns are visible on the nearer side of the temple; of those on the farther side the only one shown is that which supports arch over entrance; beyond this last stands Atys r., holding pædum in r. and grasping pine-tree with l.; above, MATRIDEVMSALVTARI.

Æ. 1.45 (mm. 37). ↑↑ Wt. 26.43 grammes.
[Cf. Sab., Pl. xi. 5.]

The symbol on the obverse of this contorniate is decidedly uncommon. The reverse, which is in singularly good condition, is developed from the reverse type of a 'first brass' coin of Faustina.⁵⁰

⁴⁹ Eckhel (*Doctrina*, viii. 309) describes the head on the obverse of the Ulysses contorniate as Pius.

⁵⁰ See Mrs. K. Esdaille, in *Num. Chron.*, 1908, pp. 56 ff., where will be found some interesting remarks upon the temple represented on the contorniate.

CARACALLA.

1.—Bust of Caracalla r., laur., wearing cuirass and paludamentum; back shown; around, MAVRELANTONINVS PIVSAVGBRIT. [Cf. Sab., Pl. iii. 7.]


R.—View of the interior of the Circus Maximus; in centre of field is the *spina* with obelisk and *metae*; to l. of obelisk, statue of the Magna Mater riding upon a lion l., beyond which the *ovaria*, with eggs upon the top; to r. of obelisk, lion bounding r., beyond which a distyle *aedicula*; in upper part of field, two quadrigae galloping r., the foremost charioteer holding whip in r.; in lower part of field, two quadrigae galloping l., the foremost charioteer holding whip in r. and looking back at his comrade, who is reining in his horses. [Cf. Sab., Pl. iii. 2.]

Æ. 1.5 (mm. 38). ↑↑ Wt. 25.39 grammes.

2.—Very similar; but in front, S.


R.—Theseus, naked, striding l., grasping with extended r. the bridle of a horse springing l.; on horse's back Amazon l. with flying cloak, holding whip in raised r. [Cf. Sab., Pl. xiv. 5.]

Æ. 1.55 (mm. 40). ↑↓ Wt. 25.58 grammes.

3.—Similar type; ruder style; around, ANTONINVS PIVSAVG; in front,  incised. [Cf. Sab., Pl. iii. 13.]

R.—Victorious charioteer driving to front as on NERO, No. 11; same monograms in exergue. [Cf. Sab., Pl. iii. 13.]

Æ. 1.45 (mm. 37). ↑↓ Wt. 20.14 grammes.

4.—Very similar; but  in intaglio.

R.—Tall male figure, laur., and wearing tunic and cloak, standing to front, head l.; he holds fan-like object in raised r. and cock l. on l. arm; on either side, a youth wearing tunic and cape, turned towards him and bending down to feed a goose. [Cf. Sab., Pl. xiv. 2.]

Æ. 1.45 (mm. 37). ↑↓ Wt. 21.92 grammes.

No. 4 is pierced, and is in rather poor condition.

For a discussion of this interesting reverse type (No. 4), see Mrs. Esdaile's article, already referred to.⁵¹ It should be noted that on the Hunter example the bird, which is usually held in the r. hand of the central figure, has been tooled into a representation of something entirely different.

CHARIOTEER.

1.—Half-length figure of charioteer, bare-headed, r., wearing tight-fitting garment, on the outside of which is a strap wound several times round his body; he holds goad in r., and with l. grasps bridle of horse, only head and neck of which are visible; in field behind him, round cap with chin-strap, beneath which are faint traces of a diamond-shaped object, with dots in and about it. [Pl. IV. 3.]

R.—Naked male figure, bearded, seated l., holding between his knees the head of a companion, whose raised arm he grasps by the wrist with his l., while his r. arm is passed behind his back to grasp his opponent's l. foot, which is thrust well forward [= Sab., Pl. vii. 12].

Æ. 1.45 (mm. 36). ⬆⬇ Wt. 23.12 grammes.

2.—Similar type; but charioteer is bearded and has his hair bound with a diadem; in field behind, ∇ incised.

R.—Charioteer, driving galloping quadriga r. and looking back; he holds whip in r. and reins and palm in l.; the horses have palms (or plumes) upon their heads; around, from l. upwards, ELI ANVS. [Cf. Sab., Pl. vii. 3.]

Æ. 1.4 (mm. 41). ⬆⬆ Wt. 27.85 grammes.

⁵¹ *Num. Chron.*, 1906, pp. 256 ff.

- 3.*—Similar type; but the goad has been changed by tooling into a spear, while the charioteer's l. hand has been similarly transformed into the fore legs of the horse; in field behind, palm downwards, incised; beneath, AETIO. [Pl. IV. 4.]

R.—Blank.

Æ. 1.55 (mm. 39). Wt. 24.90 grammes.

- 4.*—Similar to No. 1; but cap has no chin-strap, and there is no trace of diamond-shaped object beneath; around, from l. upwards, STA BV L I - - - . [Cf. Sab., Pl. vii. 10.]

R.—Victorious charioteer driving quadriga to front, as on No. 11 of NERO; in exergue, traces of monograms. [Cf. Sab., Pl. iii. 13.]

Æ. 1.45 (mm. 36). ↑↓ Wt. 20.73 grammes.

This concludes the list of contorniates in the Hunterian Museum. But it may be convenient to take this opportunity of supplementing my previously published catalogue of Dr. Hunter's Roman Medallions.⁵² The following, which had escaped my notice through being placed in a tray apart from the others, now fall to be added:⁵³—

TRAJANUS DECIUS.

- 3a.—IMPCMQTRAIANVSDECIVSAVG Bust of Trajanus Decius r., radiate, wearing cuirass and paludamentum; chest shown.

R.—Felicitas, draped, standing to front, with caduceus and cornucopiae; around, FELICITAS SAECVLI; in field, S C.

Æ. 1.35 (mm. 33). ↑↑ Wt. 37.83 grammes.

⁵² *Num. Chron.*, 1906, pp. 93 ff.

⁵³ The medallion of Diadumenianus (*l.c.*, p. 109) ought, on the other hand, to be subtracted. I am afraid it may be of seventeenth-century workmanship.

GALLIENUS.

2.—IMP GALLIENVS P - - - Bust of Gallienus l., wearing paludamentum and cuirass, and holding spear.

R.—The three Monetae in usual attitude, with usual attributes; around, - - - E - - -

Æ. 1·45 (mm. 36). ↑↓ Wt. 35·92 grammes.

CONSTANS.

1a.—FLIVLCONSTANS PIVSFELIXAVG Bust of Constans r., wearing laur. diadem, cuirass, and paludamentum fastened across chest, which is shown; border of dots.

R.—The Emperor, wearing cuirass, paludamentum, and military boots, standing l., bare-headed, holding vexillum in r., and with l. supporting shield which rests on ground beside him; around, from l. upwards, TRIVMFATOR GENTIVMBARBARAVM; in exergue, TES; border of dots.

Æ. 1·5 (mm. 38). ↑↓ Wt. 13·37 grammes.

[B. M. C., Pl. lx. 1.]

CONSTANTIUS II.

1a.—CONSTANTIVS AVGVSTVS Bust of Constantius II r., wearing laur. diadem, cuirass, and paludamentum fastened across chest, which is shown; wreath border.

R.—Two winged Victories, standing face to face, support-

ing between them a wreath, within which

VOT

XX;

MVL

XXX

around, from l. upwards, VICTORIAE DDNNAVGG; in exergue, SIS between two palms; wreath border.

Δ. 1·6 (mm. 40). ↑↓ Wt. 20·17 grammes.

[Pl. IV. 5.]

1b.—FL[*I*]VLCONSTANTI VSPIVSFE[LIXAVG] Similar
type; border of dots.

R.—Laurel-wreath, within which, SIC
XX
SIC; around, GAV-
XXX
DIVMPOPVLIROMANI; below, between ends of
wreath, TES.

R. 1.5 (mm. 39). $\uparrow\downarrow$ Wt. 10.46 grammes.

No. 1b is in poor condition, as if damaged by fire.

GEORGE MACDONALD.

V.

SIMON'S DIES IN THE ROYAL MINT MUSEUM, WITH SOME NOTES ON THE EARLY HIS- TORY OF COINAGE BY MACHINERY.

(See Plates V.-VIII.)

It is a matter of great regret to the student of numismatics that so few mediaeval coining instruments are preserved in our museums, as they would frequently furnish conclusive evidence in the solution of many knotty problems. Of the series of matrices, punches, and dies in the collection at the Royal Mint, only a very few are anterior to the middle of the seventeenth century, a point of time constituting an epoch in the monetary history of this country. From this period, however, almost an unbroken continuity is maintained, chiefly in punch or matrix form, of the dies used for coins struck in this Mint.

The examples that exist of the die-work of this epoch possess a twofold interest for the numismatist. They comprise specimens of the handicraft in steel of that prince of English die-engravers, Thomas Simon; and, in the second place, they constitute the sole relics of the actual tools employed at the time when the transition was finally made in this country from manual to mechanical methods of coin-production.

An examination of these specimens has led to the belief that a contribution may still be made to the

history of the mode of coining practised at that period, and especially of the method of marking the edges of the coins with letters and grainings. In the following paper an attempt is therefore made to collect what evidence on this subject is available, and, so far as possible, to reconstruct the methods then employed.

It may not be altogether inopportune to preface the description of these coining tools and their use, with a brief summary of the principal facts so far as they are known, of the history of the introduction of machinery into minting operations.

This history, prior to the date of the final adoption in England of mechanism as an aid to coining, divides itself into chronological periods, which may be characterized as follows:—

(1) The mechanical methods employed in Italy in the earlier half of the sixteenth century.

(2) The establishment, in 1551, of a full set of coining apparatus in Paris.

(3) The coinage of mill money in England (1561-1572).

(4) Nicholas Briot, and his methods of coinage (1606-1646).

(5) The re-establishment of coinage by the mill in France, and the methods of Peter Blondeau in the time of the Commonwealth and the Protectorate (1645-1658).

(1) COINAGE BY MACHINERY IN ITALY.

Machinery seems first to have been employed as an adjunct to the medallie art, and subsequently, as portraiture and devices in high relief began to be used

upon coins, it was gradually adopted as a handmaid of the sister art also.

According to Keary,¹ medals were first struck from engraved dies in the early part of the sixteenth century by Francesco Francia, the Mint-master at Bologna. It is not clear whether or not machinery was used in this instance; but the inefficiency and the inexactitude of the hammer method would at once be apparent to the keen susceptibilities of the artists of the Renaissance. And an imperative demand at once arose to provide greater facilities for transferring from the wrought steel to the silver or bronze blank, the fulness of detail and the life and character of the original design of the artist. These exigencies could only be satisfied by the introduction of suitable mechanical aids for meeting the necessities of the case. The surface of the metal disc or flan destined to receive and reproduce the impression from the smoothed dies must itself possess a degree of smoothness and freedom from flaws and irregularities which it would seldom, if ever, gain by repeated blows from the hammer.² To produce this necessary evenness of surface, a laminating or a drawing machine was utilized. Secondly, perfect circularity in the blanks with uniformity of size was instinctively found to be an indispensable setting for a portrait or decorative design, and this regularity of form and dimension

¹ *Guide to Exhibition of Italian Medals, British Museum, 1893*, p. xiii. Fabriczy, however, awards the priority to Euzola (1437) of Parma: see his *Italian Medals*, 1903, trans. by Mrs. Hamilton, London, 1904, p. 97.

² Mr. Macdonald has, in a sentence or two, made an admirable summary of this phase of the Renaissance: "[The Italian medal] was, in the hands of Pisanello, for example, the effort of a painter to find a new medium of expression. And it was for portraiture that it was chiefly employed. From the medal the true portrait made its way back to the coin."—*Coin Types*, 1905, p. 258.

was secured most readily by the use of a cutter of given size which punched from a strip of metal blanks of a circumference usually approximating to that of the die. A third necessity for mechanical aid was occasioned by the high degree of embossing or relief which was given to the steel punches. To impart a corresponding relief to the medal, a percussive blow or blows with the dies must be struck of far greater force than could be obtained by means of a hammer; and, further, when it was needful for the blows to be repeated many times, they must, to prevent distortion on the medal, fall with mathematical exactitude upon the same spot on the dies. The balancier was invented to fulfil these conditions of effective striking. The use of the screw as a mechanical power was then known, and was already adopted for other arts, such as printing. In the balancier, the screw was adapted to provide the enhanced power requisite for striking medals. This worked in a vertical plane, and was set in motion by horizontal levers swung by workmen, while the accuracy of its stroke upon the dies beneath was ensured by the rigid guides attached to the supporting frame. To minimize the amount of force required to bring the design into adequate relief, the size of the medals was reduced, the average diameter being decreased from about 4 inches to $1\frac{1}{4}$ inch.

Machinery, therefore, was introduced to overcome the practical difficulties in the art of striking medals from dies. Incidentally the new method had the advantage of enabling artists to multiply copies of their medals at a more rapid rate than formerly, and to supply more readily the newly awakened and ever-growing demand for the productions of glyptic and kindred arts, while the

execution of these examples was such as placed them on the level of the high standard of taste prevailing at that period—a period when, in the general consensus of subsequent opinion, medallic art attained its highest pitch of excellence.

From the striking of medals by machinery to the striking of coins by the same process was but a step; and this step was the easier since goldsmiths and engravers of gems and of dies for medals were frequently appointed to responsible positions in the Mints.

The first name associated with the screw-press is Bramante (1444-1514), an eminent Italian architect and painter, and a relative of Raphael. He is believed to have manufactured a press for striking the bullae of Pope Julius II (1503-13), which was afterwards used to strike the medals of Caradosso (1445-1527) for the same Pope.

Without question, however, mechanical means were devised by Bramante's more distinguished contemporary, Leonardo da Vinci (1452-1519). Towards the close of his life this versatile genius seems to have been associated in some way with the Mint at Rome (*circ.* 1514), and he has left on record notes and sketches of a method of cutting out discs from fillets or strips of metal by means of a hollow cutting-punch, the fillet having been previously drawn to the requisite gauge, presumably between rollers. In this way a series of blanks for medals or coins could be obtained equal in weight, size, and roundness. But in all probability this machine was light in construction and only adapted to produce comparatively thin pieces.

The fragmentary extract from Da Vinci's notebook alluding to this process is translated by Dr. Richter and

included by him in the literary works of the artist.³ This extract, which is headed "Mint at Rome," and refers to the cutting-press, is as follows :—

"It can also be made without a spring. But the screw above must always be joined to the part of the movable sheath.

"All coins which do not have the rim complete are not to be accepted as good; and to secure the perfection of their rim it is requisite that in the first place, all the coins should be a perfect circle; and to do this a coin must before all be made perfect in weight and size and thickness. Therefore have several plates of metal made of the same size and thickness all drawn through the same gauge so as to come out in strips. And out of these strips you will stamp the coins [*i.e.* punch the discs or blanks] quite round, as sieves are made for sorting chestnuts, and these coins [blanks] can then be stamped in the way indicated above."

Unfortunately, this indication of the particular way to which allusion is made is not extant, but in all probability the striking was by means of Bramante's press. The extract continues—

"The hollow of the die [cutting-punch] must be uniformly wider than the lower, but imperceptibly.

"This cuts the coins [blanks] perfectly round, and of the exact thickness and weight; and saves the man who cuts and weighs, and the man who makes the coin round. Hence it passes only through the hands of the gauger, and of the stamper, and the coins [blanks] are very superior."

Rough sketches of these tools are reproduced by Dr. Richter (plate lxxvi.), showing that the blanks were cut from the strips of metal by being forced upwards

³ *The Literary Works of Leonardo da Vinci*, compiled and edited from the original MSS. by Dr. J. P. Richter, London, 1883, vol. ii. pp. 17, 18.

into the upper tool, which was hollow. By the usual methods of modern practice the discs are driven downwards.

It has been stated that Da Vinci invented or adopted the practice of striking medals and coins in an iron ring or collar; but I have not been able to verify this statement.

Ten years after Da Vinci's death, Benvenuto Cellini was appointed by his patron, Pope Clement VII, engraver at the Mint in Rome, where he remained for some seven years, and engraved dies for both medals and coins. This brilliant artist, whom Mr. J. A. Symonds enthusiastically describes as the "Genius of the Renaissance, incarnate in a single personality," must have become acquainted with and probably made use of the press of Bramante, and also the tools of Da Vinci introduced into the Mint at Rome only a few years previously.

In support of this supposition it will be found that Cellini, in his racy Autobiography, makes several interesting references to his own connexion with the new methods of medal and coin production. When he first went to Rome, he appears to have sought to acquire whatever information was available regarding the art of striking medals and coins from steel dies. He says—

"There were also other masters who worked at medals carved in steel, which may be called the models and true guides for those who aim at striking coins in the most perfect style. All these divers arts I set myself with unflagging industry to learn."¹

Shortly afterwards the Pope summoned Cellini to his presence, with the intention of obtaining his services in

¹ *Life of Benvenuto Cellini*, translated by J. A. Symonds 2nd ed., 1888, vol. I. p. 61.

the preparation of new dies for his Mint. The young artist, who confessed he had never made dies before, though he had seen them engraved, was nothing loth to undertake this commission.

Clement informed Cellini of the nature of the design to be used on these trial dies. The obverse was to bear the figure of a naked Christ with hands tied and the inscription ECCE HOMO; and on the other side the Pope and the Emperor supporting a cross, with the inscription VNVS SPIRITVS ET VNA FIDES ERAT IN EIS.⁵ This task was quickly accomplished. He made two dies in steel, and struck a specimen piece in gold, which he took to the Pope on a Sunday. His Holiness was delighted, and before his fervour had abated, the astute engraver drew from his pocket a patent which he had prepared, appointing himself stamp-master to the Mint, and entreated the Pope to sign it there and then. The Pope agreed and signed the document forthwith, securing to him the post, which, he says, was worth "six golden crowns a month, in addition to the dies, which were paid at the rate of a ducat for three by the Master of the Mint."⁶

Cellini employed similar methods for medals with such skill that Pope Clement inquired how he managed "to stamp them so marvellously, large as they were, for he had never met with ancient pieces of that size."⁷

When Paul III, the successor of Clement, was elected to the Papal See in 1534, Cellini engraved the dies for the new coinage.

Subsequently we find him at Florence, where he

⁵ In a separate treatise Cellini speaks of these designs being used on two coins. *Tratt. dell' Oreficeria*, c. xiv.

⁶ *Op. cit.*, vol. i. pp. 124-126.

⁷ *Op. cit.*, vol. i. pp. 176, 187, 190.

received orders from Duke Alessandro to make coin-dies, and lodgings in the Mint were assigned to him. He tells us he engraved dies for four denominations of coin, the half-giulio being an exceptionally thin piece.⁹

After a visit to France, Cellini returned to Florence, where he worked under the patronage of the Duke, Cosmo de' Medici, as "sculptor, goldsmith, and stamper of coins." Addressing the Duke, he said—

"My lord, if you will undertake to pay some workpeople, I am ready to strike coins for your Mint, and medals for your portrait. I am willing to enter into competition with the ancients, and feel able to surpass them, for since those early days in which I made the medals of Pope Clement, I have learned so much that I can now produce far better pieces of the kind. I think I can also outdo the coins I struck for Duke Alessandro which are still held in high esteem."¹⁰

These references taken in conjunction with Cellini's *Treatise on Goldsmithing and Sculpture*,¹¹ which he wrote in Florence in 1568, fully establish the fact that in the earlier part of the sixteenth century great progress was made in Italy in the art of medal and coin striking. Cellini treats of the engraving and hardening of matrices, puncheons and dies according to a new plan, and of coining both by the hammer and by the screw. From his description of the coining-press it will be found that it embodied all the main principles of the balancier.¹²

⁹ *Op. cit.*, vol. i. pp. 211-216.

¹⁰ *Op. cit.*, vol. ii. pp. 210, 211.

¹¹ *Trattato dell' Orologeria in Firenze*, c. xiv.-c. xvii.; translated by C. R. Ashbee, London, 1898.

¹² A sketch of Cellini's press based on this description has been made by Mr. Ashbee (*op. cit.*, p. 78), and a slightly different one was previously published by Prof. Roberts-Austen ("Cantor Lectures on Alloys," *Society of Arts Journal*, March to April, 1884).

Da Vinci's methods of rolling or drawing strips of metal to a definite thickness, and of punching out discs of equal size, weight, and roundness seem to have been known to Cellini, and adopted in place of the ancient method of trimming pieces of metal into a round shape by means of hand-shears. But the thick flans he produced by casting; and in order to reduce the labour of striking medals of high relief with the dies, he made the mould from an impression struck in lead. By this means the cast blank showed part of the design in relief before being placed between the dies, and required fewer blows under the press to complete the medal.

It is interesting to observe that Evelyn, in writing more than a century later of the invention of machinery for coining, also refers to Italy as the country where mechanical contrivances for this purpose were originally adopted. He writes—

"I find Hierom Cardan speaking of one at Venice (where that Noble *Mint*, the *Zeccha* is Establish'd) who long since (he says) devised an Engine, which both Stamp'd, Out and rounded Money by one Operation only, for which he was Rewarded by the State (as well he deserv'd) with an ample Pension : But that it was first of all set up, and practised here with us, before the *French*, is ingeniously acknowledg'd."¹²

Evelyn was not familiar with the technicalities of coining, and the engine he mentions for stamping, cutting, and rounding was probably no more than a machine for cutting out blanks such as that of Da Vinci's, to which reference has already been made. Stamping does not allude to striking with dies, but to the punching out circular discs from a strip of metal instead of cutting the

¹² *Discourse on Medals*, by John Evelyn, 1697, pp. 225, 226. Evelyn, no doubt, refers to Cardan's *Trattato di numeri e misure*, published in 1555-60.

metal into a round shape with shears, as was formerly done. But there is no evidence of the priority of English enterprise in this direction, as the concluding sentence of the extract implies.

Two of the coins of Pope Clement by Cellini are included on **PL. V.** (Nos. 1 and 2). Their circularity and the regular beading on their rims may be observed, but it will be noticed that in one case (No. 2) the beading does not appear on the whole of the circumference, due to the fact that the coin has not been struck centrally by the dies.

The various improvements introduced in this period include in a rudimentary form mechanical methods for almost the whole of the coining processes in which machinery is employed at the present day. But there is no evidence that the coins were marked or lettered on the edges, nor do they appear to have been struck in collars. This device was brought into use in the period to which we now come.

(2) COINAGE BY MACHINERY IN FRANCE (1551-1585).

Cellini visited France in 1537, and spent some years at the Court of Francis I, in the exercise of his art as sculptor and goldsmith. He was honourably treated by the king, to whom he communicated some information regarding the new methods of producing medals and coins at Rome and Florence. In his Autobiography, he records one such interview at Fontainebleau—

“With his Majesty I disputed some time about the fashion of his coinage, a point upon which we were not of the same opinion; his counsel, who were present, kept persuading him

that the monies ought to be struck in the French style, as they had hitherto always been done. I urged in reply that his Majesty had sent for me from Italy in order that I might execute good work ; if he now wanted me to do the contrary, I could not bring myself to submit. So the matter was postponed." ¹³

Apparently this opposition prevailed, for there is no evidence that Francis took any steps towards the establishment of machinery in Paris, and Cellini eventually returned to Italy, having been driven from France, mainly through the intrigues of the king's favourite, Madame d'Estampes, whom he had offended.

During his stay in Paris it is said that the great artist was invited to England by Henry VIII. His possible influence at the Tower Mint, had the invitation been accepted, affords a pleasant exercise for the imagination of the student of comparative numismatics.

In 1547 Francis I died, and was succeeded by his son, Henry II, who, shortly after his accession, influenced no doubt by the remembrance of Cellini's reports of the Italian way of coining, and also by the great prevalence of the crimes of clipping and forging, sought to institute a reform of the French currency by improving the quality of the coins issued. By an edict of August, 1548, he ordered his portrait from the life ("son effigie d'après le naturel") to be engraved on his coins, to prevent forgery ; but a more radical change than this was to follow, the requisite aid for which came not from Italy but from Germany. M. L. Mazerolle ¹⁴ tells us that about 1550 the French ambassador, De

¹³ *Op. cit.*, vol. ii. p. 142.

¹⁴ *L'Hôtel des Monnaies*, par Fernand Mazerolle, Paris, 1907, p. 26.

Marillac, reported to his king that a goldsmith of Augsburg possessed the secret of imparting to coins regularity of weight and circularity of form. Henry lost no time in despatching to Augsburg the Master of the Lyons Mint and a brother of his ambassador with Aubin Olivier, a skilled mechanician, to act as their technical assistant and adviser.

After some secret negotiations, a set of the minting apparatus was purchased from the German jeweller, whose name was Marx Schwab, for the king, and one of the vendor's workmen accompanied the tools to Paris that they might be set up in proper working order.

According to Le Blanc,¹⁵ Henry ordered the machines to be installed in a house of the baths situated in the grounds of the Palace, where, in January 1552,¹⁶ proof coins were satisfactorily struck in his presence. In spite of strenuous opposition from the *Cour des Monnaies*, issues of the new coins were subsequently made, and the pieces are justly famous for their excellence of design and workmanship. They became known as mill-money (*Monnaie du Moulin*), from the circumstance that the necessary power for driving the machinery was in the first instance supplied by a mill formerly used by Matteo

¹⁵ *Traité historique des Monnoyes de France*, 1792, p. 268. Boizard, in his *Traité des Monnoyes*, Paris, 1714, says the coinage began in 1552 (p. 157), but Mazerolle gives 1552: see also the next note.

¹⁶ Du Fresnoy, or Du Cange, as quoted by Ruding, vol. i. p. 342 (1840), gives January 27, 1550, as the date of the ordinance establishing the *Monnaie du Moulin*, and January 29, 1551, as the date of Henry II's edict for striking testons by the mill. These dates should probably read 1551 and 1552 respectively, full work having been commenced in the latter year. M. P. Lacombe has produced confirmatory evidence of the establishment of the *Monnaie du Moulin* in 1551 from *Les Chroniques de Jean Corion*, a work published in 1553. The passage is quoted in *Gazette numis. française*, 1904, p. 429.

dal Nassaro, an Italian gem-engraver, under whom Béchet, the Graveur-général, had studied in his younger days. Dal Nassaro's mill, which was in existence in 1534, was known as the "Moulin de la Gourdaïne," and seems to have been set up to polish precious stones.

The machines for coining introduced from Germany on this occasion comprised the rolls (*laminoirs*) for reducing the cast plates or bars of metal to a suitable thickness; the draw benches (*bancs à tirer*), presumably for adjusting the thickness of the rolled fillet; the circular cutting-punches (*coupoirs*), for preparing the discs or flans of the required size and weight; the presses (*balanciers*), for striking the blanks with dies; and the appliances for holding the dies in position under the press (*tenailles*). The last-mentioned class may have included iron collars or rings for enclosing the blanks while they were being struck.

This machinery was placed under the direction of Aubin Olivier, who, in 1556, succeeded to the duties, though not to the office, of De Marillac, who had been made superintendent of the *Hôtel des Monnaies du Moulin* in 1552. The engraving of matrices and punches for the whole of the French mints was in the hands of the celebrated Parisian artist, Marc Béchet, who was appointed by Francis I to the new post of Graveur-général, created in 1547.¹⁷ His designs excel in beauty of type, and were well reproduced by the mill process. In the newly established mint, Jean Erondelle and Etienne de Laune, probably under Béchet's direction, engraved the necessary dies. The former of these, within a short

¹⁷ *Medallic Illustrations of British History*, by Hawkins, Franks, and Grueber, 1885, vol. ii. p. 720.

time of his appointment, conveyed models of the new machines to Henry of Navarre, who set up a similar mint at Pau, and in 1556 placed Erondelle in charge of it, as a recognition of his services.¹⁸ It is generally considered that the machine-struck coins subsequently issued from the Pau Mint attained to a high standard of excellence.

I have been unable to obtain any examples of the Pau issues to accompany this paper, but three mill coins of the Paris Mint are illustrated, two dated 1552 and one 1553 [Pl. V. 3, 4, and 5]. These specimens afford evidence by their workmanship that the Paris machinery was much superior to that employed in Italy. The pieces are above the ordinary thickness, and have the edges smooth and plain.

Some of the coins struck at the *Monnaie du Moulin* in Paris are the first known to be marked with letters on the edges. They were invariably thick pieces, and bore the inscription in relief. This effective precaution against clipping and forging was introduced by Olivier, who was, no doubt, the clever inventor of the segmental collar (*virole brisée*) by which the device was accomplished. Schlösser¹⁹ mentions a coin of Henry II, dated 1555, with the inscription on the edge, SOLI DEO HONOR ET GLORIA, and another of Henry IV, dated 1577, inscribed PACI QUIETI ET FELICITATI PVBLICAE. There is in the Royal Mint collection a piedfort of Charles IX, dated 1573, with the inscription, ✠ VERÆ | RELIGIONIS | ASSERTORI |.

¹⁸ *Diog. Dict. of Metallists*, by L. Forrer, vol. ii. p. 26; see also J. A. Blanchet, *Les Graveurs en Béarn*, Dax, 1888.

¹⁹ *Die Münztechnik*, Hannover, 1884, p. 176. Rochon had previously mentioned this coin, *op. cit.*, p. 101.

Another specimen of this piece occurs in the British Museum, and is illustrated [Pl. V. 6, 7], as well as its inscription, which is in relief on the edge. The collar used in the production of this piece consisted of three segments. The three places of junction between the segments are indicated by the upright lines in the inscription as shown above, and two of these sutures can be seen on the plate, the third occurring at the end of the third word.

It will be observed that in the inscription [Pl. V. 7] on the British Museum piece the first two letters of the word ASSERTORI are absent, though they are plainly indicated on the Mint specimen. This hiatus is probably due to the fact that these two letters, which would be incuse in the collar, were accidentally filled up by pieces of metal or some other substance, and consequently a smooth blank space such as is shown would occur on the edge after striking.

In Pl. V. (No. 8) a piedfort of Henry IV, dated 1607, is shown. This also has an inscription in relief on the edge : PERENNITATI PRI | NCIPIS GALL | IÆ RESTITVTORIS | .

Opportunity may be taken here to correct the impression arising, it would seem, from a statement by Rochon,²⁰ that Antoine Brucher was the inventor of the laminoir. It is certain that the art of rolling metals for manufacturing purposes must have been practised prior to its adoption for medal and coin work, and it has already been mentioned that the laminoir was introduced into Paris from Germany in 1552. Brucher, or Brulier, did

²⁰ *Essai sur les Monnoies*, Paris, 1792, p. 62. The same attribution is erroneously made by M. E. Dumas, in his *Notes sur l'émission en France des Monnaies décimales de bronze*, Paris, 1868, p. 29.

not enter the service of the Mint until 1558, several years after its establishment. He was employed as an engraver, principally of dies for medals and jettons, and is credited with having introduced improvements in coining methods, the nature of which are not known. But while he may have improved it, there is no reason to suppose he invented the laminating-machine. Schlösser's suggestion²¹ that Olivier was the inventor, seems equally without foundation.

The *Monnaie-du-Moulin* was not in operation many years as a coining establishment. Several causes combined to hasten its cessation. Henry II, who was its patron, died in 1559. The opposition of the ancient corporation of moneyers was fierce and bitter. Olivier found that the work of striking medals was more lucrative than that of coining. And in 1585,²² the year before Aubin Olivier's death, coining by the mill was formally prohibited by an edict of Henry III, the machinery being subsequently employed exclusively for the production of medals and jettons.

(3) FIRST COINAGE BY MACHINERY IN ENGLAND (1561-1572).

Shortly after her accession in 1558, Queen Elizabeth instituted measures for the reform of the English currency, which was in a deplorable condition owing to the great prevalence of base and clipped coins. About this time one Mestrell, possibly a disaffected or discharged workman from the Paris Mint, came to

²¹ *Op. cit.*, p. 122.

²² *Traité des Monnoies*, par Jean Boizard (1st ed., 1692; 2nd ed., 1714), p. 158.

England, evidently with the intention, like Erondelle three or four years previously at Pau, of making as good a bargain as possible of what knowledge he possessed of the new method of coining. Under the patronage of the Queen and the Council, he was introduced to the Tower Mint, and in 1561 gold and silver coins were struck by the new process.

There is a fragment of interesting evidence relating to this issue of mill coins which occurs in a letter dated the following year, June 6, 1562, from Grindal, who succeeded Bonner as Bishop of London in 1559, to Conrad Hubert, a Protestant preacher at Strasburg. He writes—

"You will receive from Abel or Salkyns (if he bring you this letter) two golden coins of our country, stamped after a new fashion, and in a manner resembling print."

He sent a third piece to Doctor Sebald, and adds in a postscript that the three pieces are "more remarkable for their workmanship than their value."²³ The mill gold pieces struck about this time were the half-sovereign, the crown, and the half-crown, and the apologetic tone of the episcopal postscript suggests that the sample coins were of the last and least of these denominations.

This extract certainly affords contemporary evidence in favour of the late President's remarks in a recent paper²⁴ on these mill coins, wherein he accounts for the absence of signs of wear on existing specimens by the hypothesis that they were treasured as pocket-pieces. There can be no doubt that other persons acted as Bishop

²³ *Zurich Letters*, 2nd series, Parker Society, 1845, p. 74.

²⁴ *Nam. Chron.*, 4th Series, XIX. p. 312.

Grindal did, and in this way many mill coins were preserved on account of their novelty and beauty, while those that were actually put into general circulation would quickly disappear in accordance with the well-known currency law of the contemporary financier, Sir Thomas Gresham, which may be paraphrased as "the non-survival of the fittest."

In London as in Paris, there was vigorous opposition to the new method of coining from the Corporation of Moneyers at the Tower, who felt that Mestrell's innovation was a direct blow to their vested interests. After a few years the process was altogether discontinued. On the 25th August, 1572, the Warden of the Mint, Sir Richard Martyn, reported that Mestrell's machine had, after repeated trials, been found defective.²⁵ From contemporary Acts of the Privy Council, as summarized in the Record Office publications,²⁶ we gather that the Frenchman, who is variously termed Ministrell, Mensterell, and Mestrell, was apprehended in 1577 under the charge of making stamps for coining. From prison he addressed a piteous appeal to the Recorder, and to Martyn, the Warden of the Mint, that his goods which had been seized might be restored to his wife and mother and family, on account of their great poverty. There is, however, no record of the result of this petition.

Mestrell was condemned at the Norfolk Assizes on the 1st of April, 1578, whereupon he turned informer against one Drury, a confederate, who

"dwellinge at the signe of the Crosse Keyes in Thetforde, dealt with him for the making of a certain stampe of xiid.

²⁵ Ruding, *Annals of the Coinage*, i. 345 (1840).

²⁶ *Acts of the Privy Council*, vols. ix. and x.

for the counterfaiinge of her Majesties moneyes, and for that purpose repaired to his house in Southwarke to receave the same, and had further (as it is reported) at the same time one of blacke visage in his house, verie skillful in alchimie."

Seven days later he accused two others, one Browning and one Goodwin, of similar malpractices; they also were apprehended. This form of usefulness to the State did not, however, prevent the issue, on the 14th of the same month, of an order for Mestrell's immediate execution, unless "he shall be able to discover greater matter." This we may suppose he did not do to the extent which would be required for the revocation of this sentence. Ruding gives the date of his execution as 1568, which is ten years earlier than is warranted by the Acts of the Privy Council, to which reference is already made.

There is, however, reason to believe that this discrepancy is to be accounted for by the circumstance that there were two Mestrells executed for counterfeiting coin during this period, one named Philip and the other Eloye. Stowe and Holinshed both refer to the former. Stowe says—

"The xvii of January [1569] Philip Mestrell, a Frenchman, and two Englishmen were drawne from Newgate to Tiborne, and there hanged, the Frenchman quartered who had coined gold counterfeit, the Englishmen, the one had clipped silver, the other cast Testons of Tinne."²⁷

Holinshed uses almost the same words, but records the date of execution as the 27th of January.

Ruding, quoting from Cooper's *Chronicles*, has 1568

²⁷ *The Chronicles of England*, by John Stowe, 1580, p. 1135.

for 1568-9, it being unquestionable that the three chroniclers refer to the same event.

On the other hand, it is equally clear from the several references in the Privy Council Acts that Eloye or Elloye Mestrell was apprehended in 1577, nine years later, and condemned at Norfolk Assizes in 1578, as already mentioned. It is not likely that Eloye Mestrell would be brought from Norwich to London for his execution. We have, indeed, an instance of the converse practice in Holinshed, under date February 25, 1577—

"John de Loy, a Frenchman, and five English gentlemen was conveyed from the tower of London towards Norwich, there to be arraigned and executed for coining of monie counterfeite."

Possibly these prisoners were some of those against whom Eloye had informed.

However this may be, there is presumptive evidence that there were two Mestrells, one executed in 1569, the other in 1578. It is also possible that Philip was the father of Eloye, since in a letter of his already mentioned, pleading the poverty of his relations, he states that his mother, as well as his wife and family, were dependent upon him. His mother was therefore a widow, and had probably come over from France before the unfortunate end of her husband Philip. The custom of engraving continuing in families lends probability to this view. The names of the Oliviers, the Briots, the Simons, the Roettiers, the Pingos, the Wyons, and others readily occur in this connexion. It is not difficult, therefore, to suppose that both Mestrells were employed in the Mint, and that one of them was the engraver mentioned in

Ruding's list,²⁸ especially as the same form of the name, Menestrelle, occurs in the records of the time.

It may be added, as a sequel to the execution of Eloye Mestrell, that instructions were issued by the Privy Council, on the 19th of May, 1578, to Lord Darcy, to search the house of one Smithe at Harwich, who two years previously purchased "a presse and a stampe for dalers for ten pounds." It is not stated from whom the press was purchased, but it is not unlikely that Eloye Mestrell, who was tried for his offence in the neighbouring county of Norfolk, was the vendor.

We will now consider what machinery was employed at the Tower. So far as is known there is no specification extant of the tools introduced by Mestrell, but his improvements were probably confined to the cutting of the blanks perfectly round by means of a cutting-punch, and striking them with dies in some form of press or balancier. The employment of these two methods may be inferred from an examination of the coins themselves. With the exception of the half-sovereign, it will be found that the coins are not marked on the edges with letters or grainings.

As in France, so the coins struck by machinery in England at this period are referred to in contemporary writings as "mill-money." Shakespeare²⁹ and Ben Jonson,³⁰ as we know, speak of "mill-sixpences." The same term was also employed in the Mint itself, as we find from later testimony in the animadversions of the moneyers of the Commonwealth against Peter Blondeau when, with

²⁸ *Op. cit.*, i. 44.

²⁹ *Merry Wives of Windsor*, act i. scene 1.

³⁰ *Masques*, The Gypsies metamorphosed.

grim satisfaction, they reminded him of "what became of the Coyner that made mill-monie in Queen Elizabeth's time."⁵¹ The modern phrase is the slightly modified one, "milled money," and is used in describing coins which are marked with letters or grainings on the edge. This is a signification which the term did not originally possess, but which it has acquired from the usage of modern numismatists. Evidence relating to the proper and the improper use of the word was brought before this Society many years since by Mr. E. J. Powell.⁵² Without reviewing that evidence, it may be added here that the early history of machine-struck coins fully corroborates Mr. Powell's contention that milled coins are not necessarily such as are marked on the edge. As already stated, the new Mint in Paris, set up in 1551, was known as the *Monnaie du Moulin*, and it received this designation because the mill of the Italian lapidary was utilized to transmit the necessary power for driving the laminoirs. Horse-mills and water-mills were used for a similar purpose in the Tower Mint when coining machinery was installed on comparatively a large scale in the following century.

The coins issued from the new Mint in Paris, owing to their place of origin, were naturally referred to as mill-money, in distinction from those struck by ancient methods, which circulated side by side with them, but only a very few of the machine-struck pieces bore lettering or marking on the edges. When Mestrell came to London, his object was to show how this mill-money, so recently introduced into France, could be

⁵¹ *Annals of the Corporation of Monies in the Mint, &c.*, 1653, p. 31.

⁵² *Num. Chron.*, New Series, XIX. pp. 298-312 (1865).

made in England, and it has already been noted that only the half-sovereign had any marking whatever on the edge. Whether or not he employed a mill, that is, mechanical means, for reducing strips of metal to an equable thickness before the blanks were cut out, it is difficult to determine. But, using the term "mill" in a loose way, numismatic authors from the time of Leake have credited Mestrell with introducing "the mill and the screw." Henfrey even goes so far as to use "mill" as a synonym for a coining-press. He says, "The coining-press or mill was known to Benvenuto Cellini in the 16th century." "In England the coining-press, or mill and screw, was introduced by a Frenchman named Mestrell, in the reign of Elizabeth."²⁰ But this usage of the words is in an erroneous sense. The screw, not the mill, was the coining-press.

It remains now to consider in what manner the edges of these pieces were produced. Kenyon states that the edges of many of the Elizabethan coins

"were marked with straight lines, or 'milled,' probably by means of including the blanks in a collar so marked, slightly wider than themselves, to the size of which they would expand on being struck with the upper die, and which might be opened to take them out."²¹

The markings on the edge of the mill half-sovereign of Elizabeth can hardly be described as straight lines. The edge is serrated or corrugated in a manner roughly resembling the teeth of a cog-wheel, the indentations showing great irregularities. Such an edge could not have been produced by being struck in a *virole brisée*, as

²⁰ *Numismata Cromwelliana*, 1877, p. 65.

²¹ *Gold Coins of England*, 1884, p. 127.

Kenyon suggests, nor in a plain collar. The marks, which are very coarsely executed, were no doubt placed on the metal blank before it was struck, by means of some form of knurling tool such as is used by jewellers, and others. It may be added here that the pieces were too thin to receive lettering on the edges.

The silver pieces, so far as can be ascertained, had no graining on the edge. These, like the gold, are circular, but were struck without a collar. Had collars fitting the necks of the dies been used, the obverse and reverse impressions must of necessity have been produced centrally on the coins. It is rarely, however, that the beading which surrounds the inscriptions is perfectly reproduced throughout the circumferences of both obverse and reverse inscriptions. This proves beyond question that no mechanical appliance was in use which maintained the relative positions of dies and blank in accurate register at the moment of percussion.

A slight burr at right angles to the face of the coin is to be seen on some pieces, and this has been regarded by some as evidence that a collar was used. This burr, however, is similar to the one always caused on the blank when punched from the strip of metal, the burr always increasing as the tool becomes worn. It only occurs on one side of these coins, and by its position indicates where the coins, not being accurately placed, overlapped the dies. On the specimens of Mestrell's coins that I have examined, the burr is found either on the obverse or the reverse, but never on both, and, as might be expected under the conditions supposed, it is most pronounced on those coins that are struck badly out of centre.

Before passing to the next period, attention may be

drawn to another technical term. The word "edge," as applied to coins, is sometimes used in an ambiguous manner. In the foregoing remarks it has been applied only to the parallel sides of the cylinder of metal of which the obverse and reverse of the coin form the circular faces. While the edge of the mill-money is not always marked, there is invariably a strongly marked beading round the rims, that is, the perimeters of the two circular faces of the coins. This border of lenticular-shaped beads⁸⁵ was a new feature in coinage, and by its regularity round the rim, when properly executed, formed in itself a protection against clipping, which was a strong recommendation when the reform of the currency was so strongly desired.

The improvement in appearance, due to this introduction of beading on the rim, can be seen by reference to **Pl. VI.**, which includes illustrations both of a hammered and a mill half-sovereign [1, 2], and also of a hammered and a mill shilling [3, 4].

It is possible, therefore, that in describing the money of this period, some writers have not differentiated between the edge and the rim, and, when speaking of graining on the edge, meant to say beading on the rim. Leake draws some such distinction, but not with perfect clearness. He seems to call the part distinguished above as the rim the "flat edge," and the edge the "thick edge," the latter epithet being hardly suitable when 0·019 of an inch is the maximum thickness of the

⁸⁵ The circular dots placed round the rims in earlier reigns were more irregular and much smaller in comparison. An illustration showing an interesting series of the mill coins of England and France is included in the Earl of Pembroke's Plates, 1746, and is useful for purposes of comparison (p. 4, t. 31).

gold, and 0·035 of the silver coins (shilling), to which he refers. His words are—

“These [Sovereigns (*i.e.* Half-sovereigns)] were coined by the mill, having graining upon the flat edge; and there are some few Half and Quarter-Sovereigns [*i.e.* Quarter-Sovereigns and Half-crowns] of this sort, with graining both upon the flat and thick edge of the rim, being undoubtedly the first English money coined with the mill, or that had graining upon the rim.”²⁶

Snelling, before Leake, uses “flat edge” in the same sense. Speaking of Elizabeth’s mill-money, he says they “had only a graining or grenelle on the flat edges, but no inscription.”²⁷ When Hawkins describes the milled coins as having “their edges grained with various patterns, and are without inner circle,”²⁸ he is no doubt referring to the flat edges, like Snelling; but his expression is misleading as it stands.

(4) BRIOT, AND HIS METHODS OF COINAGE (1606-1646).

In the history of the application of machinery to the production of coins, the Briot period is a highly interesting one. Driven from France through the opposition of the *Cour des Monnaies*, he came to England about 1625, where he engraved dies and struck coins for Charles I. Subsequently he worked in the Scottish Mint.

The exact nature of Briot’s alleged improvements in coining is not very clearly understood, and his methods deserve a more lengthy investigation than can be

²⁶ *Historical Account of English Money*, 3rd ed., 1793, p. 247.

²⁷ *View of Pattern Pieces*, 1763, p. 49, note.

²⁸ *Silver Coins of England*, Kenyon’s ed., 1887, p. 304.

undertaken in this paper, which is already extended beyond anticipation.

Briot struck the Scottish Coronation Medal of Charles I with an inscribed edge, but his English coins do not bear letters or grainings on the edge, although, like Mestrell's, they have beading on the rims. The special consideration of his coins and the manner of their production can therefore be deferred without affecting the object of the present inquiry.

An example of Briot's work is shown [Pl. VI. 5]. This is a piedfort of Louis XIII, dated 1618, which has an inscription in relief on the edge, showing three sutures,

| + IVSTISSIMI · | · REGIS · | · PERENNITATI

(5) RE-ESTABLISHMENT OF COINAGE BY THE MILL IN FRANCE, AND BLONDEAU'S METHODS IN ENGLAND (1645-1658).

The *Monnaie du Moulin* was transferred to the precincts of the Louvre Palace early in the seventeenth century, and became known in consequence as the *Balancier du Louvre*. Very little work was done until 1639, coins with inscribed edges having been struck at intervals, but chiefly by way of experiment. In this year the Mint was placed under the direction of Jean Varin, who was a skilful mechanic and a die-engraver. Under his superintendence the machines and tools were put into working order, and various medals, piedforts, and pattern coins were struck to demonstrate the superiority of the new process.

Through the influence of the Chancellor Seguier, a lover and patron of art, and one of the originators of

the *Académie Française*, of which he became president, Varin successfully withstood the antagonism of the Paris moneyers of the old school. In 1640 the edict re-establishing the process of "coining by the mill," issued in the previous year by Louis XIII, was confirmed, and louis d'ors were ordered to be struck; while in March, 1645, the permanence of the machine methods was assured by the formal abolition in Paris of coinage by the hammer.

The coins produced were exceptionally well struck, and Le Blanc,³⁹ writing nearly fifty years later, is profuse in his praise of the accomplished Varin and his mill-money. He declares that the pieces excel in beauty all coins since the time of the Greeks and Romans, referring no doubt more especially to the comparatively high relief of Varin's coins. He claims a further superiority over the ancient pieces because of their perfect roundness and their grained and lettered edges, which were effective precautions against clipping and counterfeiting. He even applauds the inventions on the score of humanity, since, by the prevention of these capital crimes, the machine-struck coins saved the lives of an infinite number of His Majesty's subjects, which, as he justly and naïvely remarks, might be more usefully employed by the State in other ways.

Judging from the size of the larger Parisian coins, more powerful rolling-mills and cutters, as well as coining-presses, were installed than those in use prior to 1639. The edges of the thicker pieces were generally marked by means of the *virole brisée*. This is clear from the vertical lines usually, but not always, to be seen on

³⁹ *Op. cit.*, pp. 302, 303.

the edges, and from the statements of Le Blanc, that by the new invention the coins were marked on the edge at the same time as they were stamped on the obverse and the reverse.

Two fine piedforts of Louis XIV, both dated 1644, are reproduced [Pl. VI. 6, 7]. They bear the same inscription in relief on their edges: ✠ PONDERE SANCTVARII.

It is at this juncture that the history of Peter Blondeau and his influence on the methods of coinage in England commences. As is well known, the French engineer was invited to England by the Government in 1649, shortly after the re-establishment of coining machinery in Paris, and after the issue from the Tower Mint of the barbarous money of the Commonwealth, of which even the Council of State seems to have been ashamed.

The history of improvements in coinage methods repeated itself in the active hostility displayed by the Corporation of London Moneyers to Blondeau, and no definite progress in the negotiations was made until 1651. In this year warrants were issued to Blondeau and David Ramage respectively, to prepare patterns of mill-money with marked edges, for submission to the Council.

The principal point to be contested by them was the relative excellence of their methods for lettering and graining the edges of coin; and the Corporation of Moneyers elected as their champion David Ramage, who had the advantage of having previously been employed by Briot in the preparation of his pattern coins, and of having by this means acquired some knowledge (in a limited degree, doubtless) of the use of machinery for coining. Briot had resided in the Tower, and some of his tools were then in the Mint, for we find from the record-

that about ten years later the moneyers were requested to send all Briot's tools to Sir John Falconer in Scotland. These tools and Mestrell's probably still remained on the Mint premises, and if not actually used by Ramage, would serve as models for new machines, though they themselves were past repair. At any rate, Ramage, in his account, charged the large sum of £50 for "the fitting of tooles and instruments."

It would seem that rolls were used to reduce the silver to the requisite gauge as to thickness. Thomas Simon was directed, by a warrant dated May 8, 1651, to deliver to Ramage "two rollers and a drawing-mill." These Simon had probably been using in the production of his medals. The uniform roundness of Ramage's patterns indicates that circular punches were employed to cut out the blanks, and they were probably struck by means of some rude form of balancier. The work on the dies being shallow, no exceptional degree of force was required to raise the impression on the coins.

The edges were most probably marked by means of the *virole brisée*, or segmental collar. Briot was acquainted with the use of this piece of mechanism, and from him Ramage is likely to have derived some knowledge of this method. Judging by the edges of his coins, he was far from expert in the manipulation of the collars, and no one will now agree with the moneyers' own statement that "the letters about the edges of the peeces we made are more fair and exacter than Blondeau's peeces." Only the half-crown [Pl. VII. 2] had a lettered edge. Its inscription, TRVTH * AND * PEACE * 1651 *, was in relief.

It is clear that the workmen at the Tower experienced some difficulty in producing their patterns. Only a few pieces were struck, the cost of the gold and silver bullion

used amounting only to £11 4s. 3d. Those coins having inscribed edges were made specially thick to lessen the difficulty of manufacture.

Blondeau's specimens are decidedly superior to those of Ramage, and were so regarded by the Council. In their production he had the great advantage of the collaboration of Thomas Simon, Graver of the Irons; and a warrant dated May 9, 1651, authorized Blondeau to use such "Engins and Instruments" as were in the custody of the Graver of the Mint. Simon had been a pupil of Briot, and probably understood mechanical rolling to gauge, cutting out blanks, and striking in a press. Briot cut out his coin-blanks oval in form, and it is noteworthy that the Dunbar, the Lord General, and the Naval Reward medals executed by Simon at this period are also oval. These medals were struck from dies, and to obtain the high relief shown on extant specimens a balancier of some kind must have been employed. Simon was also acquainted with the use of presses for seals, and in his account for seals made between 1650 and 1656, he charged £78 for presses supplied for this purpose.

The "engins and instruments" to be placed at Blondeau's disposal, referred to in the warrant mentioned above, were no doubt those used by Simon in medallie work. But while these were suitable enough for producing the limited number of copies of a medal that would be required, and also for the production of his pattern pieces, they were not sufficiently expeditious for the execution of a national coinage, and improved as well as more powerful types of these machines were felt to be necessary.

Blondeau came to England by invitation as an expert,

(1) to introduce machines similar in principle, but in a form more adapted to coinage work ; and (2) to introduce what he claimed to be his own invention—a special method of marking the edges of the coins. He stated that he was prepared to enter into a contract for the performance of all the coining processes, and for the maintenance of the machinery and utensils. But the preparation of dies Blondeau acknowledged he was unable to undertake, and when in July, 1651, his pattern coins were submitted at Whitehall, the attendance of Simon as the engraver, and of himself as the engineer, was required by warrant.

About three hundred pieces were laid before the Council, and the chief interest lies in the contrivance employed for marking the edges. The roundness of these pieces, their high relief, the polish or gloss on the coins, due partly to their not being struck hot, were characteristics which they possessed in common with coins then being produced in France, as well as their marked and lettered edges. But Blondeau, according to his own statement, had invented an entirely new method for producing inscribed edges, and he offered to go to prison and lose his life if any one else in England or the world could be found who knew it. Only his half-crown [PL. VII. 1] has raised letters on the edge. One example is inscribed IN · THE · THIRD · YEARE · OF · FREEDOME · BY · GODS · BLESSING · RESTORED · 1651, and another TRVTH · AND · PEACE · 1651 PETRVS · BLONDÆVS · INVENTOR · FECIT. In the latter case a palm-branch is inserted after the date and after FECIT.

The moneyers declared Blondeau's invention was an old method which they themselves knew, and that it was impossible for his "way" to be used on thin coins.

To this the "French minter" replied that he could mark the edges of the coins with letters by two different methods, one of which was "ancient" and known to several, and was "long in doing," and, as he admitted, could not be used on thin pieces. The other way, he says, is a "particular invention found out by me, and no man but I can do it."

Blondeau declared further that the specimens of his rival were made by the first way, which was that of the *virole brisée*, known and used a hundred years before. What, then, was his own method of producing the inscribed edges? In this inquiry very little aid is to be obtained from Blondeau's memoranda addressed to the Government on the subject, and printed in 1653 with replies by the moneyers. The Frenchman is careful to guard his secret by using vague and ambiguous terms in his documents, but some evidence on the subject may be gathered from collating his various remarks.

Now, an inscribed edge must be produced either simultaneously with the obverse and reverse impressions, or by a separate operation. I believe Blondeau's lettered edges were produced in the former manner. He stated that the money coined after his way would be "marked on both sides and upon the brims [*i.e.* edges]," while he also declared it to be impossible by the hammer process "to mark all the pieces at one stroke as in the said Blondeau's invention." He also says the engines required are great and heavy ones, being between one and two thousand pounds in weight, occupying great room, and requiring several men to work them.

It may be inferred, therefore, from these remarks, that some modification of the *virole brisée* method was adopted

by Blondeau. The use of the ordinary segmental collar was found to be not sufficiently expeditious for the work of coining,⁴⁰ and through lack of means for the accurate adjustment of the screw of the press, the upper die in its descent often struck a portion of the steel collar enclosing the blank, causing the destruction of both die and engraved collar,—in Blondeau's words, spoiling a great many "stamps and engines." On this account these collars were soon abandoned for coinage work, and used only for striking medals, jettons, and *pièces de plaisir* in Paris, and in 1685 the Castaing machine was introduced for marking the edges, some years subsequent to the date of the event we are now considering.

For the sectional inner collar Blondeau seems to have substituted a thin strip of steel in one or two pieces, corresponding in width with the thickness of the coin. This strip bore the inscription in incuse letters, and was placed inside a solid collar and around the blank or flan, which rested on the face of the lower die, this being greater in diameter than the blank, and thus providing a base for both the blank and the steel ribbon. The upper die being placed in position and the blow struck, the impressions were transmitted at the same moment to the flat sides and the edge.

The raised letters on the edge of the coin served to fix it firmly in the outer collar, from which it had to be

⁴⁰ "Cette virole brisée s'ajuste coniquement dans une seconde virole qui n'est pas brisée. Dès que le flacon enclavé dans la virole brisée a reçu sous le balancier l'empreinte qu'il impartait de lui donner, on le retire de la virole brisée ou non brisée; mais cette opération qui donne tout à la fois la marque sur tranche et l'empreinte des deux aires ou des deux côtes de la médaille, ne se concilie pas avec la célérité exigée dans le monnayage." Rochon. *op. cit.*, p. 95. See also *Traité des Monnaies*, par Abot de Bazinthen, Paris, 1764.

forced by a wooden peg struck with the hammer, the steel virole releasing itself by its own elasticity. These viroles would not be exempt from fracture, but their renewal would be more expeditious and less costly than that of steel segments.

In surrounding the flan the ends of the ribbon were made to overlap each other, and at the junction or junctions guide-marks were usually placed in the steel, which show as raised dots on the edge of the coin. By this means the overlapping parts were uniformly secured in the same relative position while the blow was struck. This arrangement can be easily traced on the Cromwell coins, which were more carefully struck than Blondeau's patterns. The dot or dots indicating the position of the catch occurs between two upright lines and on opposite sides of the edge. Thus on the half-crown of 1656 and the crown of 1658 [Pl. VIII. 5] the inscription is arranged as follows:—

I · I HAS · NISI · PERITVRVS · I · I MIHI · ADIMAT · NEMO · ✕

The perpendicular lines represent the overlapping edges of the steel ribbon, and not the joints of a segmental collar, as Henfrey suggests,⁴¹ the part of the edge between these lines being depressed, as may be seen in the plate. The junctions of the three or four sections of a *virole brisée* are usually equidistant, and are indicated by single lines. In this instance the strip of steel can be seen to have consisted of two portions of equal length, while in the production of the celebrated Petition Crown only one piece was used, as appears to have been also the case in some of Varin's piedforts.

⁴¹ *Op. cit.*, p. 111.

The broad [Pl. VII. 3] also had an inscribed edge which was evidently produced in a similar manner. The depressed portions of the edge due to the increased thickness of the engraved steel fillet where the ends overlapped may be traced in the illustration—before LITERÆ and before ET [Pl. III. 7].

Coins too thin to bear an inscription were marked with indented straight lines at right angles to the face of the piece. This graining might be produced in the same way as the lettering, but in such case there would be some indication of the suture on the edge. From an examination of the beading on the rims in relation to the graining on the edges, it is evident that the pieces were struck with the dies after the edges were marked. This latter operation was no doubt effected in a machine on the principle of the one greatly improved by Castaing thirty years later.⁴² The blanks were forced edgewise between pieces of steel bearing the patterns of the graining, the pressure transferring the pattern to the edge of the piece.

Evelyn's reference⁴³ to the subject of edge-inscription for coins shows the obscurity which at the close of the seventeenth century surrounded the origin of this invention.

"The Contrivance of the *Circumscription* about the *Tranchè* or Edge of the thicker Pieces, and *Crenneling* of the small and thinner, which for ought I know, is Modern, and its Inventor (who ever he were) worthy the Honor of Medal

⁴² The Castaing machine is described by Rochoy in 1792 (*op. cit.*, p. 21), and before him by the Abot de Bazinghen, in his *Traité des Monnaies*, Paris, 1764. Rochoy claims to have improved the machine still further.

⁴³ *A Discourse of Medals*, by J. Evelyn, 1697, p. 225.

himself; whether due to Monsieur *Blondeau*, our Industrious *Rawlins*, or *Symon* (Brother to the late squalid *Embossor*) Gravers of the *Royal Mint* to King *Charles the First* and *Second*, or improv'd by the Direction of (Sir *Ralph Freeman's* Successor) Mr. *Slingsby*.⁴⁴

But while the evidence on this subject is meagre, it certainly seems to preponderate in favour of the first-named by Evelyn as the one who introduced the method of marking thin coins, the device for lettering the edges of thicker coins having originated, as has been shown, at a much earlier date.

Blondeau's patterns received careful consideration by the Council, and Mr. Henfrey⁴⁵ has produced evidence for believing that Sir James Harrington and the Committee of the Mint had 72 plates of engravings of gold and silver coins prepared to aid them in their task. These plates, it is said, were afterwards used by Snelling.

The patterns were finally approved by the Council of State, but it was not until 1656 that any definite measures were taken for the application of the machine methods to the national coinage. In August the first order was issued for the coinage according to the "new invention" of silver bullion of the value of £2000 sterling, and of a small amount of gold bullion. Simon was directed to prepare dies bearing the Protector's effigy and titles. There were delays in the issue of the proposed coins due, amongst other causes, to the preparation of the new dies, to the difficulty of finding a suitable

⁴⁴ Mazerolle admits that Castaing only improved the *machine à marquer* which was invented in England, "Le procès de Jean Castaing," *Gaz. numis. fran.* (1907), pp. 165-195. The evidence he adduces is most interesting and conclusive.

⁴⁵ *Num. Chron.* (1874), p. 159.

place outside the Tower for the execution of the coinage, and to the loss of time in delivering the bullion to Blondeau. It was not until about the middle of 1657, as Mr. Henfrey shows, that Cromwell's 1656 coins were issued. The number struck from the small quantity of silver bullion supplied to Blondeau must have been few, and being half-crowns only could not have exceeded in tale 16,000 pieces, and probably did not, in point of fact, exceed 10,000. This fact is sufficient to account for the comparative scarcity of coins of this date.

The bullion itself formed part of a large capture in 1656 from Spanish ships, and a much larger amount, probably upwards of £100,000 in value, was coined by the hammer at the Tower. At the close of 1657 a Trial of the Pyx was held of the coinage begun in 1649. During this period the coins bore a sun as mint-mark, those issued from the Tower during 1658-60 having an anchor. None of the Protector's coins were included in this Pyx trial. These, like their successors of 1658, carried no mint-mark, and were evidently regarded as still in the experimental stage. There can be little doubt that, had not the Protector died in 1658, the intention of the Council, explicitly declared in 1657, of establishing these coins as national currency, would have been carried into effect. The Commonwealth coins were established by Act of Parliament in 1649, and if the Cromwellian coins had equally been made the subject of any formal enactment, there is every reason to believe they would have been specifically demonetized at the Restoration along with the "crosse-and-harpe" money. At the same time, it is not difficult to imagine that the Protector's coins, while not legally current, may have been in circulation in small quantities.

Preparations were made in 1658 for the enlarging of the coining plant at Drury House to a considerable extent, so that £10,000 in silver might be issued weekly. The cost of the new machinery was to be £1440, and its weight was estimated at 30,000 lbs., or about 13 tons. There is no evidence that much bullion was coined, and, apart from the failure to carry out the projected scheme, it is not easy to account for the entire absence of any entry having reference to such extensive bullion transactions as would provide for a weekly issue of £10,000 in coin. This figure is no doubt mentioned as the maximum outturn of the new machinery when working at its full capacity. But it is not likely that more than a small part of the machinery was actually erected.

The whole of the punches and dies for the contemplated coinage appear to have been ready before the close of the year 1657, for Simon included a charge of £250 for this work in his account which he presented to the Council about that time. A contemporary MS. exists among the Mint papers which is a copy of this account. This MS. consists of sixteen foolscap pages, and is entitled "An Accompt of Thomas Simon, Chief Graver of the Mint Seales and Meddals, 1657." The document enumerates the items of charges made by the engraver for work done from 1650 to July, 1657, principally in connection with seals and medals.

A summary of this account is contained in the Council Entry Book, under the date, 14 Jan., 1657-8, and is quoted from that source by Mr. Henfrey.⁴⁰ The MS. in the Mint, however, gives the items *in extenso*, and the one referring to coins adds to the evidence

⁴⁰ *Op. cit.*, pp. 97, 219-223.

available on this subject by stating the number of the denominations of coins for which Simon prepared dies at the command of the Protector. I therefore quote this entry, which occurs under the heading of the "Coynes."

"For the making and engraveing of severall Originall Stampes, Dyes Piles Tressles and irons of Steele for 13 severall sorts of Coynes of Gold and Silver vizt. 6 during the sitting of the Old Parliament, And 7 by the order of his Highnesse with his Highnesses Effigies and Title on the one side, and on the Reverse, the Armes of England, Scotland, and Ireland Quartered with his Highnesses Coate of Armes in an Inescutcheon the Crowne and Motto being for MounS^r Blundeuu^s way of Coyning by the Presse

£ s. d.

250 . 00 . 00 "

From this extract it will be seen that tools with Cromwell's effigy were prepared for seven different coins. These seven kinds we must take to comprise the fifty-shilling piece, broad, half-broad, crown, half-crown, shilling, and sixpence. Whether coins of each of these denominations were actually struck is a question yet to be determined, so far as certain denominations are concerned, since the preparation of the dies does not necessarily involve the issue of coins from those dies. This question, however, is discussed at a later stage.

We now come to the consideration of these dies for Cromwell's coinage. It is indisputable that his coins are as remarkable a proof of the genius and skill of Thomas Simon as his medals, and they undoubtedly excell in a high degree all previous examples of English numismatic art. By means of the power and precision of Blondeau's machinery, the bold and striking outlines

of Cromwell's portrait on Simon's dies were faithfully reproduced in comparatively high relief. The general effect of the design was enriched by the careful modelling of the bust, and this fulness of detail was transmitted to the coin by the force of the single blow, thus preventing the fuzziness or haziness which is the result of successive blows not in perfect register. The design and legend were thrown into prominence by the polished table.

Simon relieved the surface of his work by the frosting which he introduced on the bust, the heraldic crosses, and the inscription. His letters are for the most part distinguished by a bifurcation or indentation at the bases of the vertical bars—a form of ornamentation of frequent occurrence since that date in British coin epigraphs.

Some of Simon's dies are preserved in the Royal Mint, and various references have been made to them in numismatic publications. Many of these references, however, are far from reliable, and it is proposed in this paper to describe them afresh.

It is an error to suppose that these dies have been preserved in the Mint from the time of their use for coinage purposes. In point of fact, the Cromwellian coins were struck at Drury House in the Strand, and there is no ground for believing that, if they had been transferred to the Mint, they would have escaped destruction at the Restoration any more than the Commonwealth dies.

Simon himself would be most likely to keep possession of the Cromwell dies, and at his death in 1665, Mr. Wroth states⁴⁷ that he bequeathed his stock of punches, dies, and engraver's tools to his nephew William, the son of his deceased brother Nathaniel, who was probably selected

⁴⁷ *Dict. of Nat. Biography*, art. "T. Simon," vol. lii. 265.

as the legatee because of some experience that he had of the use of such tools. It is not improbable that this bequest included the Cromwellian dies.

I am, however, indebted to Mr. Grueber for the following note from Vertue's MSS. in the British Museum:—

“Of Thomas Simon, engraver of coins and medals, says Mr. Marlow, jeweller of Lombard Street, that in the year 1676, he then bought of the widow of Simon's (who was then married to Mr. —, a dissenting person) all the tools, stamps, puncheons, wax impressions, etc., that did belong to Mr. Simon, which he left and appointed by will to be preserved together for the use of his son, if he lived and should follow the profession of his father, but as he was of weak understanding when he grew up and not fit for such an employment he was otherways provided for, and these things sold, amongst which were many puncheons for the figures, heads, etc., of the broad seals, medals, coins, letters, etc.”

It is to be regretted that Vertue did not ascertain whether the Cromwell dies were included in this purchase, and, if so, what was their subsequent history.

Whoever became possessed of these effects of Simon, it is certain that these dies did not come into the custody of the Mint until the year 1700; and that they were then not claimed as Mint property, but acquired by purchase.

This fact has hitherto been overlooked. Neither Mr. Alchorne, “Assay Master of the Mint,” in his letter to Mr. Combe⁴⁸ in 1780, on the subject of Mint records of Simon, nor Mr. Henfrey in his valuable monograph on Cromwellian numismatics, makes any mention of it. Had the latter known that a great part of this batch of dies now at the Mint had been at large for over forty years,

⁴⁸ Vertue's *Works of Thos. Simon*, 2nd ed., 1780, p. 81.

he would no doubt have considerably modified some of his theories.

The entry in the Mint books of the transaction is explicit, and shows that the actual purchase was made by the Master and Worker, Mr., afterwards Sir, Isaac Newton. It occurs in the minutes of a Board meeting held on the 9th of November, 1700, and is as follows:—

"The Master reported that he had bought, according to the direction of the Board, 10 puncheons and 9 dies graven by Mr. Simonds famous graver in the time of Ol. Cromwell for 14 guineas.

"Mr. Croker, Ingraver of the Mint, chose out of them to pair⁴⁰ 2 puncheons, one a head and the other an armes for crown pieces, two puncheons being a head and armes for sixpences, and two dies being a head and armes for 2^d pieces of gold, giving his receipt, and the rest were locked up in the Treasury."

Anticipating the notes that follow, it may be convenient to say here that the ten punches purchased in 1700 were for the following coin-dies: broad, 1 obv.; half-broad, 1 obv.; crown, 1 pair; half-crown, 1 obv.; shilling, 1 pair; sixpence, 1 pair, (medal), 1 obv.

The nine "dies" purchased at the same time comprised 1 obv. die for half-broads, 1 pair of matrices for crowns, 1 obv. matrix and 1 pair of dies for shillings, and 1 obv. and 2 rev. dies for sixpences.

The total number of Cromwell matrices, punches, and dies now in the Royal Mint is twenty-six, and it has now been found possible to identify the nineteen purchased by Mr. Newton, seven dies being undoubtedly manufactured in the Mint at a later date. The latter dies

⁴⁰ To pair, *i.e.*, I take it, to verify by measurement that the two were intended to work together in each of the three cases.

have steel marks on their shanks identical with dies of the earlier part of the reign of George II, and the period of their origin is therefore beyond question.

It is proposed to give a short description of each of these coining tools, under their respective denominations.

Fifty-shilling piece.—There are no dies for this coin in the Mint collection. Henfrey asserts⁵⁰ that the broad dies were used, but on extant coins there are differences in the styles of lettering which indicate that more than one pair of dies was used. In the case of the thicker pieces most of the letters on both the obverse and reverse have indented or bifurcated bases, while on the broad they are found only on the reverse, and there they are only barely discernible. Simon's account, quoted above, seems to include a charge for the preparation of tools for this denomination.

Broad.—There is an obverse punch only in the Mint. This has every appearance of being the work of Simon, and corresponds in shape, measurement, and style with punches of that period. As is usually the case with puncheons, nothing but the bust is engraved, and the wreath is without berries; these, as well as the inscription, would be added in the matrix or die.

Half-broad.—Of this denomination there are an obverse punch (A) by Simon, a pair of dies (B) of doubtful origin (purchased), and a pair of dies (C) by Tanner.

The obverse punch (A) is of the usual form, but is badly cracked. To render it serviceable for sinking dies an iron ring has been forged round it at some time. The false marks which would be produced by the flaws in the punch on a die sunk by this tool are such as could be easily removed by an engraver.

The obverse die (B), part of the purchase in 1700, was probably produced by the punch (A), but not by a Mint die-sinker. Its rough appearance suggests an entire lack of skill and experience in the manufacture of dies. It is cylindrical

⁵⁰ *Op. cit.*, p. 104.

in shape, and is more suited for use in a mouton, or monkey-press, than in an ordinary screw-press. The outlines of the bust are faint, suggesting that the apparatus used by the die-sinker was not sufficiently powerful for his task. The lettering is coarse and irregular, and deeply cut in contrast with the bust, while the beading round the rim varies considerably from uniformity. The die is badly cracked and sunk in use, that is, hollowed at the centre. The inscription differs from that usually appearing on Simon's coins by the absence of *dc*.

This die was used for striking what Henfrey calls "Tanner's Half-broad No. 2,"⁵¹ and its fellow was a reverse die (B) corresponding in style, shape, and workmanship [Pl. VII. 6]. This latter die was produced from a reverse punch for sixpences, the shield of arms being ornamental like those on the series of silver coins, and not plain like the gold broad. It was made under similar conditions to the obverse, the shield of arms being shallow and the inscription coarse and deep. The date on the die is 1658, and there is a false mark for the 8, where the figure punch was first struck in error too near the shield. This mark is an outline of part of the figure 8, and is not due to an alteration of the date from 1656 to 1658, as Henfrey says.⁵² Neither of these dies has been properly hardened, and this one is also sunk and badly cracked. Any pieces struck by these dies must necessarily be abnormally thick to allow for the hollowness in the dies. And it is quite possible to account for the existing heavy specimens of Cromwell coins if they were struck by dies of this description.

While it would be an outrage to attribute this pair of dies (B) to Tanner, the remaining pair (C) were undoubtedly produced during his term of office in the Mint. During this period the figures 0 to 9 were used to mark the various kinds of steel forgings manufactured into dies. The shank of this obverse die (C) is marked 0 like some of the dies and punches for coins of George II, and the reverse die (C) is similarly marked with a figure 2.

The *obverse* die is from the punch (A), but the bust has

⁵¹ *Op. cit.*, p. 139, Pl. iii. 5.

⁵² *Op. cit.*, p. 107.

been worked upon in the die stage by the engraver. It has certain peculiarities which should serve to identify all coins struck by it. There is a bead of irregular form on the rim between the D and the G. The letters OLIVA are out of alignment, and the uppermost berry in the wreath has an elongated form as if it were double. The coin figured by Henfrey as Simon's half-broad⁵³ has these peculiar marks, and therefore can hardly be Simon's, as he asserts. This die is now cracked.

The reverse die (C) corresponds in size and shape with the last. The punch with the garnished shield of arms for the sixpence was used, and the die was extensively worked upon by the engraver, the inscription and date being added, and the harp-strings. The die is now useless, parts of the face having been broken away, and the last two figures of the date have disappeared. From minute points of agreement in the shield of arms and the remaining letters of the inscription the identity of the design with that of the coin described by Mr. Henfrey⁵⁴ as Simon's half-broad is practically certain. In his illustration⁵⁵ of the piece he calls Tanner's half-broad, No. 1, which he admits has the same reverse, cracks crossing the letters RI may be seen, and they agree in position with one of the broken places on the dies. Impressions from these dies are illustrated (see Pl. VII. 6).

Crown.—The coining instruments for the crown pieces are of exceptional interest on account of their size and general excellence of workmanship. There are in the Mint Collection, one pair of punches (A), one pair of matrices (B), and three obverse and two reverse dies (C), only one pair of the dies being serviceable. Of these the punches and matrices were acquired in 1700, the remainder being manufactured subsequently in the Mint.

The matrices (B) are described as dies in the account of purchase, and Henfrey alludes to them as Simon's original dies, but they have no neck like dies, and could not easily be used to strike coins. These matrices are probably Simon's

⁵³ *Op. cit.*, Pl. iii. 3.

⁵⁴ *Op. cit.*, Pl. iii. 3.

⁵⁵ *Op. cit.*, Pl. iii. 2.

work, but were most likely discarded at the time as faulty. In both instances, the bases of the matrices are out of parallelism with the faces. This would make it almost impossible to obtain a good impression on them from the master-puncheons, or to transmit impressions from them to working punches. In corroboration of this, the lettering and beading, which are engraved by hand, are found by comparison to be relatively much deeper than either the bust or the shield. The inscriptions are also different in style from those on Simon's coins, none of the letters having indentations at the bases. The obverse is cracked, the main line of fracture crossing the bust, and joining the initial and final letters of the inscription. The position of this flaw, almost coinciding with that shown on Simon's coins, indicates that this is a weak part of the die. Neither of these matrices corresponds with Simon's, Tanner's, or the Dutch crown. Impressions from them are shown on **Pl. VIII. 4.**

In the Hunterian Museum there is a thick specimen, weighing 664.66 grs. Mr. Macdonald has been kind enough to send me an impression of this piece, and it proves to have been struck from this obverse matrix (B) and Tanner's reverse die (C). The edge is without inscription, and to get such a good impression from the dies, it was necessary to use a blank of abnormal thickness.

The obverse punch (A) is an original one by Simon. The bust, however, differs from that on Simon's crowns in the arrangement of the hair and in the folds of the mantle. The lobe of the ear is partly visible, showing slightly below the hair, which is not the case on the coins. There are surface cracks on the cheek, and also one in a vertical direction, ascending from the shoulder. All traces of these flaws could be removed from the die by the engraver, and the berries added to the wreath. The punch is barrel-shaped, and measures about $3\frac{1}{4}$ inches in height and 2 inches in diameter.

The reverse punch (A) of the shield of arms is similar in shape, and measures about 3 inches in height and 3 inches in diameter. It exhibits considerable differences from the usual type of Simon's coin. The most conspicuous of these are to be observed in the band of the crown, the orb, the heraldic lion, and the figure on the frame of the harp, which has no

strings. The frosting marks on the crosses are square in pattern, instead of circular as on the crown-pieces of Simon.

The pair of dies (C) are those by which the pieces known as Tanner's crowns were struck. The peculiarities of the punches for the bust and shield of arms (A) already pointed out are reproduced in the dies, both of which have also the steel-mark O, like the half-broad dies, establishing the date of their production. The style of the letters and of the beading resembles the matrices (B) and not Simon's coin, showing that the engraver copied the former, which were before him, and not the latter. The chief difference from the matrix is to be seen in the letter P, which occurs twice on the obverse, and once on the reverse. This letter shows an abnormal thickness in the lower part of the vertical down-stroke, due to the breaking away of a piece of steel from the die when the letter-punch was used. The number and direction of the harp-strings on the reverse matrix correspond with Simon's coin, but the ninth string is no more than a faint scratch, and was probably overlooked by the engraver, for only eight are cut on the die.

Beside this pair, there are two obverse and one reverse dies from the same punches (A), all of which are in an unfinished state. Two of them have the steel-mark O.

It may not be altogether out of place here to refer briefly to the question of the alleged alteration of the final figure of the date on the crown reverse die, making 1656 into 1658. This theory is first recorded by the Rev. Mark Noble,⁶⁶ who alludes to the alteration in general terms, as if it applied to all the various denominations of coins instead of to the crown only. This information he states he received through the Earl of Sandwich⁶⁷ from the Rt. Hon. Lord Hawkesbury. The

⁶⁶ *Memoirs of the Protectoral House of Cromwell*, 2nd ed., 1787, vol. i. p. 310, note. The passage, which is identical in the 3rd ed., published also in 1787, is quoted by Mr. Henfrey, *op. cit.*, p. 130.

⁶⁷ The fourth Earl of Sandwich took a special interest in Noble's

biographer's remarks contain obvious inaccuracies which need not now be indicated, but there is a presumption that his theory, in the main, is based on a substratum of truth. Lord Hawkesbury, afterwards the first Earl of Liverpool, was Master of the Mint in 1775, and wrote in 1805 a Treatise on the Coins of the Realm, which became celebrated among political economists if not among numismatists. His statement may, therefore, be fairly regarded as possessing considerable weight.

Mr. Henfrey,⁵⁸ however, repudiates the theory of any alteration in the die, but it is, I think, indisputable that the reverse die by which some of the 1658 crowns were struck bore what are known as "false marks," and these are to be traced on the coins, one to the right, the other to the left of the upper loop of the figure 8. It is not easy to account exactly for the presence of these marks.

The general explanation is that a die was engraved for striking pieces dated 1656, but for some reason none were struck, and "to save the die" the final figure was altered to 8. But, as has been seen, the die was usually sunk by a punch which carried no inscription, this being added to the die by the engraver. There would, therefore, be no great waste of labour in discarding a single wrongly dated die and sinking another, especially as the alteration of the figure would itself involve softening the die in order to work the steel, which must then be re-hardened.

The character of the marks on the coin is altogether incompatible with the assumption that an original 6 was

Memoirs, his ancestor, the first earl, having been a zealous supporter and a personal friend of Oliver Cromwell.

⁵⁸ He says of the crowns, "We do not think that the collector who carefully examines a well-preserved specimen will be able to detect any positive signs of alteration in the die" (*op. cit.*, p. 131).

modified to an 8. It has been suggested that the original figure was a 7, the two marks named forming the relics of its cross-bar. This is not an improbable suggestion, and its probability is strengthened by the fact that in the interior of the left-hand curve of the lower loop there is an irregularity which may very well, with the aid of the imagination, be conceived to be part of the original downstroke of this figure. The shallowness of these vestigial marks, however, as compared with the other figures, indicates that the 7 had only been outlined, and not fully cut in. In short, the most likely theory seems to be that the under-graver commenced to cut a 7 in error, but discovering his mistake before the figure was completed, he corrected it as well as he was able.

Half-crown.—A reverse punch only, with the shield of arms for the half-crown, is in the Mint. Its shape and general characteristics indicate that it is of the time of Simon, while the form of the heraldic crosses and the interior of the crown correspond with the half-crown of 1656 rather than with that of 1658.

Henfrey's statement,⁵⁹ that the punch for the obverse as well as the reverse is preserved in the Mint, is incorrect. Had this been the case, it is not improbable that some attempt would have been made by Tanner to make dies for half-crowns as well as crowns.

Shilling.—There are a pair of punches (A), a pair of dies (B), and a reverse matrix (C) of this denomination. Another obverse punch (D) is described in the Mint MS. Catalogue as for the shilling, but the relief is too great for a coin die. It has a great many rust-marks, but, judging from what remains visible of the bust, there is a general resemblance to the imitation funeral medal of Cromwell.⁶⁰ All these formed part of the purchase by the Mint in 1700.

⁵⁹ *Op. cit.*, p. 108.

⁶⁰ See Henfrey, p. 170, Pl. v. n. 4.

The obverse punch (A) has every indication of being the work of Simon, though it is now worn, and has rust-marks and cracks on the surface. There is a mark of identification to be seen in connexion with the third pair of laurel-leaves, counting upwards. This has the appearance of a small dot, situated to the left of the inner leaf. It is somewhat elongated on Simon's coin, but is sufficient to identify the punch. There are no berries on either the punch or the coin in this instance. Though the punch is worn, the frosting marks can still be observed with the aid of a lens.

The reverse punch (A) is similar in size and shape, but the shield of arms shows considerable variation from that on Simon's coins, the limbs of the heraldic crosses being narrower, besides being irregular in formation and out of alignment. The frosting marks do not agree with those on the coin, but correspond generally with those on the crown reverse punch.

The pair of dies (B) was made from these punches (A), but not in the Mint. Each of the dies is provided with four small holes, presumably for guide-pins, so that the two dies might be maintained in the same relative position while a coin was being struck. The base of the reverse die is shaped to enter a socket, and they both seem intended for use in a mouton, or falling press. The letters in both obverse and reverse inscriptions are coarse, and in some parts are placed nearer the beading than in others. The dies are sunk, that is, they have become slightly concave through use, and to obtain a good impression from them specially thick flans or blanks must be used. In proportion to the degree of concavity, which increases by successive strikings, the thickness of the pieces must also be increased. This accounts for the varying weights of the so-called Tanner's shillings, and also for the so-called pattern two-shilling piece. The N of ANG is misshapen, and serves as a mark of identification for pieces from this die. It will be seen in Henfrey's plate,⁴¹ and also in the illustrations of "two-shilling" pieces in Montagu's

⁴¹ *Op. cit.*, p. 143, Pl. iv. 3.

(No. 727, 3rd portion) and Murdoch's (No. 472, 2nd portion) Sale Catalogues.

The reverse matrix (C) is from the punch (A), but is soft and in an unfinished state.

I must call attention here to Henfrey's plate⁴³ of Tanner's shilling, which shows a colon on the reverse after QVÆRITVR, differing in this respect from most specimens, which have a single dot. As this plate was obtained from a photograph, it may be inferred that there is such a variety, which might easily occur if each die were lettered by hand, and were not sunk from a punch bearing the inscription.

Sixpence.—For coins of this denomination there are a pair of punches (A) and a pair of dies (B), all four forming part of the purchase by the Mint in 1700.

The obverse punch (A) has the mantled bust, and corresponds in style of workmanship with Simon's puncheons. The original frosting marks are distinctly visible; there are no berries in the wreath, as on Simon's coins.

The reverse punch (A) has the ornamental form of shield of arms without strings to the harp. The proportions of the limbs of the heraldic crosses differ from those on Simon's sixpences. The work lacks finish, and the punch may have been discarded by Simon as faulty. It is the one already alluded to as the parent of the reverse die for Tanner's half-broad.

The obverse die (B) was produced from the punch (A), small circular marks on the leaves of the wreath in the latter also appearing on the die. The berries have not been added in the die. The letters and beads are coarse and deep, and resemble in character those of unknown origin already described on other dies. A piece is now broken from the edge of the die.

The reverse die (B) was struck from the punch (A). It is roughly cylindrical in shape, and adapted only for monkey-press work. It is the production of an inexperienced workman. Through lack of proper hardening, it has become hollow in form, and the pieces from it would be heavier than the standard weight of the sixpence.

⁴³ *Op. cit.*, Pl. iv. 3.

To summarize the conclusions from the above notes, it is believed that the examples in the Mint include—

(1) Those of Simon's work: *Broad*, 1 obv. punch; *Half-broad*, 1 obv. punch; *Crown*, 1 pair of punches, and 1 pair of matrices of different module; *Half-crown*, 1 rev. punch; *Shilling*, 1 pair of punches; *Sixpence*, 1 pair of punches; *Medal*, 1 obv. punch.

(2) Those acquired in 1700 in addition to the above, but not Simon's work: *Half-broad*, 1 pair of dies; *Shilling*, 1 pair of dies and 1 rev. matrix; *Sixpence*, 1 pair of dies. All these were produced unskilfully with inefficient tools.

(3) Those sunk in the Mint about the fourth decade of the eighteenth century: *Half-broad*, 1 pair of dies; *Crown*, 1 pair of dies, and 2 obv. and 1 rev. dies, unfinished.

The exact origin of the second class of dies must still remain as an interesting subject of research, but whatever it was there can be little doubt that the so-called "Dutch" crown emanated from the same source. There is no record of the vendor of these dies to the Master of the Mint, but there is a strong probability that they were purchased directly or indirectly from abroad, since the possession in this country of such coining tools was a criminal offence, and they were liable to seizure. The description and illustrations of Cromwell's silver coins by Van Loon in 1723,⁶² the term "Dutch" crown used by Mr. Combe,⁶³ and the newspaper paragraph dated 1738, quoted by Mr. Henfrey,⁶⁵ referring to a purchase of Cromwell's dies in Flanders, are all in favour of the hypothesis that the re-striking was done in that country.

⁶² *Beschrijving van Nederlandsche Historie-Penningen*, vol. ii. p. 433; also his *Histoire Métallique des Pays-Bas*, 1732, vol. ii. p. 419.

⁶³ *Simon's Medals*, &c., G. Vertue, 2nd ed., 1780, p. 78.

⁶⁵ *Op. cit.*, p. 148.

It is difficult, if not impossible, to determine whether any impressions were taken in the Mint from the dies for shillings and sixpences, and there is therefore no adequate ground for describing the pieces from these dies as "Tanner's shillings" and "Tanner's sixpences," and in the absence of direct evidence a Mint engraver ought never to have been charged with the issue of such monstrosities. It remains now to consider whether his name is justly associated with certain crowns and half-broads.

From evidence already adduced, it is unquestionable that dies for such coins now exist in the Mint which were manufactured there in the early part of the reign of George II, and Tanner is the only person likely to have undertaken such a task.

According to Mr. Chas. Combe, the editor of the second edition of *The Works of Simon*, by Vertue, 1780,⁶⁶ this deed which has afforded so much occasion for serious debate among numismatists was perpetrated with the permission of the Hon. Richard Arundell, who became Master of the Mint in 1738. The dies, as we have seen, after purchase in 1700, were with the exception of those borrowed by Croker, locked in the Master's safe, and did not pass to the custody of the Clerk of the Irons. Sir Isaac Newton was succeeded in 1727 by Mr. Conduitt, who had previously been a Mint officer. On the appointment in 1738 of the Hon. Richard Arundell, who was altogether new to Mint work, a complete inventory of the Mint Office would be taken, and by this means the Cromwell dies would be brought to light. It is not certain whether Vertue had at that date commenced

⁶⁶ Page 78.

his investigations preparatory to the publication of his volume on the works of Simon, first issued in 1753; but it is quite conceivable that the new Master, who would be free from Mint traditions, might have a tender sympathy for the curious collector and authorize the engraver to strike some impressions. The Chief Engraver, Mr. Croker, who had already held his position thirty-three years, was not as likely to undertake this task as the Assistant-Engraver, Tanner.

This is the view taken in the second edition of Vertue,⁶⁷ and adopted by Ruding.⁶⁸

"In the Tower are not only Simon's two dies of the true crown of Oliver Cromwell, but likewise the puncheons by which they were made: the dye of the obverse being much cracked, Mr. Arundel, Master of the Mint, got Mr. Tanner the engraver to make two new dyes from Simon's puncheons, in order that a few might be struck to give to his friends."

"Simon's two dies" here mentioned are not dies, but matrices, as stated above, and they were not made from the punches, as Vertue says. Otherwise the statement seems to express the most probable view of the case.

Coming now to the half-broad, I quote the following remark by Pinkerton,⁶⁹ as an illustration both of his frequent want of accuracy as to facts and of the prevalent impression among the virtuosi of his day regarding the origin of this piece:—

"Of the last [the ten-shilling piece], however, the dye was only prepared: which coming into the hands of Mr. Folkes about 1760, he had a few struck from it, which are the only ones in existence."

⁶⁷ *Works of Thomas Simon*, by G. Vertue, 2nd ed., 1780, p. 78.

⁶⁸ *Op. cit.*, vol. ii. p. 336, note.

⁶⁹ *Essay on Medals*, 1784, p. 210.

A curious problem thus arises in connexion with the half-broad, for there seems to be substantial grounds for doubting whether any of the so-called Simon coins of this denomination dated 1656 were actually struck in that year. It will be remembered that the dies in the Mint supposed by Henfrey⁷⁰ to be the original ones, have been proved by their steel-marks to be the production of Tanner, and impressions from them cannot, in spite of their date, be older than the second part of the eighteenth century. Only such pieces as exhibit differences in the lettering from these are entitled to be considered genuine Simon coins. Mr. Macdonald informs me that none of the half-broads in the Hunterian Museum have indented letters.

If any original pieces exist, the hybrid character of the obverse and reverse designs is somewhat strange. In 1656 the only other coins issued, neglecting the claims of the fifty-shilling piece as an independent issue, were broads and half-crowns. As in the contemporary French coins, the gold and silver pieces were distinguished by modifications of the same design, and it is difficult to imagine why the bare bust of the broad, and the garnished shield of the half-crown, should have been combined in the case of the half-broad. In the Council's Order⁷¹ in 1656 to Simon to engrave the dies from the approved draughts, only drawings of two coins are mentioned, viz. the broad and the crown. However, the existence of the obverse punch, as well as the engraver's account, shows that this coin was projected by Simon, if not by the Council, in view of the proposed large coinage

⁷⁰ *Op. cit.*, p. 107.

⁷¹ Quoted in 2nd ed. of Vertue's *Works of Thomas Simon*, pp. 70-71.

in 1658. Assuming that an issue was made in the former year, it must have been a very limited one, since specimens of the 1656 half-broad are of great rarity, in contrast with the broad, specimens of which are fairly numerous. There is, however, little, if any, ground for believing that the extant half-broads were struck in Cromwell's time.

But while we fail to find definite contemporary evidence of the issue of this coin, the numismatic literature of the eighteenth century testifies to the suspicious fact that half-broads were better known at its close than towards the beginning. Mr. Folkes, for many years the friend and associate at the Royal Society of Sir Isaac Newton, the Master of the Mint and the purchaser of the Simon dies, in his paper communicated in 1736 to the Royal Society of Antiquaries on *English Gold Coins*,⁷² says—

“I am told there was also a Die cut for Ten-shilling pieces.”

It will be noted that he speaks not of a pair of dies but of a single tool only, and between 1736 and 1745 he appears to have found that it was not a die but a puncheon. In his *Silver Coins*⁷³ he writes in 1745—

“... there is remaining in the Tower a puncheon for the head of a ten-shilling piece, but I never heard of any such piece actually minted.”

In the reprint of his *Gold Coins*,⁷⁴ dated the same year, he states definitely—

“I have seen the puncheon that was cut for a ten-shilling piece.”

But it is, I think, clear from these extracts that Folkes had not seen a specimen half-broad, though he knew the

⁷² *Table of Gold Coins*, 1736, p. 8.

⁷³ *Table of Silver Coins*, 1745, p. 102.

⁷⁴ *Table of Gold Coins*, 1745, p. 9.

other Cromwellian coins. Neither is there any reference to a half-broad in the catalogue with plates of the Earl of Pembroke's Collection published in 1746.⁷⁵

In 1753, however, Vertue, in the first edition of his *Works of Thomas Simon*,⁷⁶ engraves a half-broad, but it is shown with a plain shield like the broad, and the &c. is omitted from the obverse inscription, the date being 1658. He says in his description, "some of these are dated 1656," showing that he believed there were two varieties. The weights he gives, however, prove that he confounded the broads and half-broads, as Mr. Combe also states in a note I quote below.

Ten years later, Snelling, in his *Gold Coins*,⁷⁷ mentions the half-broads, but believes them to be of recent origin.

"There are likewise ten-shilling pieces, but not struck in his [Cromwell's] time; but since the discovery of the dye or puncheon by Mr. Folkes, at whose instance chiefly, we presume, those we have at present owe their being."

The date on the piece illustrated in Snelling's plate⁷⁸ is 1658, and the &c. is wanting in the inscription. The shield of arms is also plain as in Folkes' plate.

In the second edition of Vertue, dated 1780,⁷⁹ a note is made by Mr. Chas. Combe on the remarks quoted above from the first edition.

"Mr. Vertue, not accurately distinguishing in this place between the broad and the half-broad, has made some confusion as to the date of these pieces; all the broads are dated 1656, and all the half-broads of the type here engraved are dated 1658; but there is a half-broad different as to the form

⁷⁵ P. 4, t. 31.

⁷⁶ *Op. cit.*, Pl. ix., pp. 7, 8.

⁷⁷ *View of the Gold Coin and Coinage of England*, by T. Snelling, 1763, p. 28.

⁷⁸ Pl. vi. No. 15.

⁷⁹ *Op. cit.*, p. 76.

of shield dated 1656; and another of the same type and date in Dr. Hunter's collection which must be considered only as a pattern, the &c. before PRO in the inscription on the obverse being omitted, on which account I suppose it to have been laid aside."

From this note it would seem that Mr. Combe had some acquaintance with half-broads bearing the plain shield like that engraved by Vertue. He says, "All the half-broads of the type here engraved are dated 1658." He then speaks of the 1656 and 1658 types with the ornamental shield. These are familiar, but the half-broad of 1656 with the plain shield is not now known, and one cannot help surmising that the artist has drawn upon his imagination in the production of Vertue's and Snelling's plates, and that Mr. Combe himself is not altogether free from that confusion which he seeks to adjust in his editorial note.

It is suggested that the origin of the half-broads of the eighteenth century was probably in the following circumstances. Tanner found in the Mint Collection an undraped punch of this size which Mr. Folkes also saw. There was also a reverse punch with the ornamental shield of arms of a corresponding size. By means of these punches he sunk a pair of dies, dating the reverse 1656 to agree with the date of the broad and the fifty-shilling piece. The &c. was included in the inscription, as on the aforesaid pieces, and on the crown matrix. This pair of dies have steel-marks which establish the period of their origin. An impression from these dies is in the British Museum, and one is figured by Mr. Henfrey⁸⁰ as Simon's half-broad [Pl. VII. 5].

⁸⁰ *Op. cit.*, Pl. iii. 3.

The obverse die then broke, and a purchased die was used with the same reverse die as before to produce impressions which are called by Henfrey,⁸¹ "Tanner's half-broads No. 1." The inscription on this die was without the &c.

The reverse die next cracked, and then the purchased reverse die would be resorted to, if impressions were required. These Henfrey⁸² calls "Tanner's half-broads No. 2" [Pl. VII. 6]. But, as before stated, pieces of this class might have been struck before the dies came into the possession of the Mint, though, in my opinion, this is extremely improbable.

This opinion was evidently held by the Rev. Mark Noble, a numismatist of his day, in his *Memoirs of the Protectoral House of Cromwell*, to which reference has already been made. He says⁸³—

"Dies for the 20 shilling and 10 shilling pieces of gold were sunk in 1656; from the former some were coined; of the latter none until Mr. Folkes discovered the puncheon; the 50 shilling piece is supposed to have been only a proof; its date also is 1656."

In conclusion, I may explain that I have not included any descriptions of the various coins, since these have already been fully and accurately laid before the Society by Mr. Graham, in his excellent paper, which is now in print⁸⁴ and available for reference.

⁸¹ *Op. cit.*, Pl. iii. 2.

⁸² *Op. cit.*, Pl. iii. 5.

⁸³ *Op. cit.*, p. 310, note.

⁸⁴ *Num. Chron.*, 4th Series, VIII. pp. 62-79.

DESCRIPTION OF PLATES.

PLATE V.

Coins of Italy.

- 1 and 2. Testoons of Pope Clement VII (1523-34), by Cellini.

Mill Coins of France.

- 3 and 4. Testoons, dated 1552, of Henry II.
5. Testoon, 1553, of Henry II.
6. Piedfort, dated 1573, of Charles IX.
7. Inscribed edge of Piedfort No. 6, showing three sutures.
8. Piedfort, dated 1607, of Henry IV.

PLATE VI.

Coins of England.

- 1 and 2. Hammered and mill half-sovereigns of Elizabeth.
3 and 4. Hammered and mill shillings of Elizabeth.

Mill Coins of France.

5. Piedfort, dated 1618, of Louis XIII.
6. Demi-testoon, dated 1644, of Louis XIV.
7. Quart-testoon, dated 1644, of Louis XIV.
The last three have inscribed edges.

PLATE VII.

1. Pattern half-crown, 1651, by Blondeau.
2. Pattern half-crown, by Ramage.
3. Broad, 1656, by Simon.
4. Half-crown, 1656, by Simon.
5 and 6. Impressions from the dies in the Mint Museum used to strike the so-called Simon's half-broad (Henfrey, Pl. iii. 3) and Tanner's half-broad, No. 2 (Henfrey, Pl. iii. 5).
7. Inscribed edge of broad (No. 3), showing junctions after LITERIS and after ET.

PLATE VIII.

1. Crown, 1658, by Simon.
2. Crown, 1658, known as the "Dutch."
3. Crown, 1658, by Tanner.
4. Impressions from crown matrices in the Royal Mint Museum, which are different from Nos. 1-3.
5. Inscribed edge of crown (No. 1), showing the junctions before HAS and before M1H1.

W. J. HOCKING.

NOTICE OF RECENT PUBLICATION.

RAPSON, E. J.—*Catalogue of the Coins of the Andhra Dynasty, the Western Ksatrapas, the Traikūtaka Dynasty, and the "Bodhi" Dynasty.* Printed by order of the Trustees of the British Museum: London, 1908.

THIS volume, the most recent addition to the Catalogue of the Indian Coins in the British Museum, is the result of several years' labour by the author, who acquired a profound knowledge of Indian numismatics during his long period of service as an assistant in the Department of Coins and Medals before he became Professor of Sanskrit in the University of Cambridge. The work, in all respects, is worthy of Professor Rapson's high reputation as both a Sanskritist and numismatist. It deals with two important and long-continued dynasties, the Andhra or Āndhra kings, and the Western Satraps, besides two minor lines of princes, the Traikūtakas and the so-called "Bodhi" dynasty, the coins of which are now published for the first time.

The book is much more than a mere catalogue of coins, the Introduction of cxxiii. pages being largely devoted to the detailed discussion of obscure problems in the ancient history of India. As a catalogue it is a marvel of completeness, being equipped with all the apparatus of indexes, etc., which the most exacting scholar could require. Legends, mint-marks, and dates have been reproduced in facsimile, with a disregard of expense, not to be imitated by writers who have not the support of the Treasury. The numerous plates could not be better, and there is a serviceable map. The table of contents is put at the end, in the French fashion; but I confess that I prefer to see it in the position usual in English books.

The printing began so long ago that the author has not been able to utilize some of the most recent publications bearing on his subject, but very little has escaped his notice.

Intricate questions of early Indian history and ancient geography would not interest many readers of the *Numismatic Chronicle*, and so must be passed by; but I may be permitted to solve one doubt which the learned author could not dispose of. Some years ago, when discussing the position of the mountain called Mahendra in Southern India, Mr. Pargiter, merely by analysis of passages in the Rāmāyana epic, divined that it must be "the most southerly spur of the Travancore

Hills." As a matter of fact, the Mahendra mountain, or Mahendragiri, situated in N. lat. $8^{\circ} 23'$, E. long. $77^{\circ} 32'$, is the southernmost peak of the Travancore Ghâts. Its height is variously stated as 5370 or 5500 feet. Superior tea is grown on the slopes.¹

When all has been said, the history of the Andhra dynasty, which ruled for four centuries and a half in the basins of the Godāvarī and Krishnā (Kistnā) rivers, remains very obscure. The coins are mostly extremely rude, and commonly in lead, but there are a good many in an alloy of copper which Professor Rapson calls *potin*, and three specimens of a more refined silver coinage are known. The dynasty came to an end about 220 or 230 A.D. Nothing could exceed the patience with which the author has worked out every detail of the exceptionally unattractive Andhra coins.

The coinage, chiefly silver, of the Western Satraps, who ruled in Kathiawar and Gujarat and parts of Malwa for about three hundred years until the close of the fourth century A.D., although not artistic, is far superior in execution to the Andhra. The silver coins are imitations of debased Greek, or rather Indo-Greek, hemidrachmae, modified by recollections of Roman denarii, and the earlier issues have corrupt Greek or Graeco-Roman transliterations of the Indian legends. During the second century A.D., these legends gradually degenerate into meaningless marks. The very latest traces of Greek legends on Indian coins appear on some of the Traikūtaka pieces from the region north of Bombay about the middle of the fifth century A.D. The small lead coins of kings whose names end in *Bodhi* come from Western India, and are supposed to date from the second century. They are extremely rude, and nothing is known about the princes who issued them.

Professor Rapson is quite right in saying (p. xii.), "The great *desideratum* of Indian numismatics at the present time is a complete collection and analysis of all the recorded discoveries of Indian coins," the Indian coin-types being "essentially local in character." The Royal Asiatic Society has proposed to bring out a work of this kind, but it is not easy to find a numismatist willing to undertake such a dry and laborious task.

V. A. S.

¹ V. Nagam Aiya, *The Travancore State Manual*; 3 vols., Trivandrum, 1906: vol. i. pp. 11, 14, 230; iii. 471, 589. This excellent compilation is not much known in Europe.



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THE COUNTERMARKS OF CLAUDIUS I





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ROMAN CONTORNIATES
HUNTERIAN COLLECTION





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ROMAN CONTORNIATES
HUNTERIAN COLLECTION



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HAMMERED AND MILLED COINS OF
ENGLAND AND FRANCE



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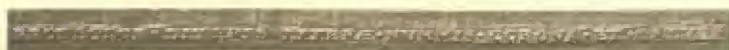
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VI.

NOTES ON A PHOENICIAN DRACHM BEARING THE NAME IAHVE.



FIG. 1.

IN the Medal Room of the British Museum a most interesting and unique silver coin, bearing the sacred name, has been treasured for ninety-four years, but only recently has it attracted much attention. In 1846 the Duc de Luynes gave an illustration of it in his *Essai sur la Num. des Satrapies et de la Phénicie*, and in 1880 M. G. Clermont Ganneau communicated his interpretation of the type to Professor Percy Gardner and to Dr. B. V. Head. In 1881 Dr. Ginsburg noticed the coin in the *Pal. Expl. Quarterly Statement*, and attributed the name יְהוָה to Jehu King of Israel; this, however, was contested by M. A. Neubauer in the *Revue des Études Juives*.

The name was recognized, in 1892, by M. Clermont Ganneau as equivalent to "Jehovah," in his course at the College of France. In the year following, the coin was noticed by M. Babelon in *Les Perses Achéménides*, and by M. Six in the *Num. Chron.*, Vol. XVIII., N.S.,

p. 124. In 1908 Mr. E. J. Pilcher endeavoured to connect the type with the vision of Ezekiel, in an article in the *Proceedings of the Soc. of Biblical Archaeology*, vol. xxx., 1908, pp. 48-52. And this year, in the *Revue Numismatique* (IV. series xii.), we have received a brief notice of all the above-mentioned articles by M. Ad. Blanchet. A very suggestive article by Mr. T. Tyler was published in the *Jewish Quarterly Review*, vol. xiii. p. 581. A more full and general statement of the facts and the problems raised by this interesting coin will be welcomed by English readers.

The coin is a drachm, or quarter-shekel, weighing 50·7 grains, or 3·3 grammes, struck on the Phoenician coin-standard, but lighter than the average weight. Its state of preservation is very good, especially on the reverse. It is illustrated above (Fig. 1), and may be described as follows:—

Obv.—A bearded head to right wearing a crested helmet, in form similar to the Corinthian type. The obverse was faultily struck, and restruck, the nose appearing twice.

Rev.—In a square slightly incuse, with a border like a cable pattern, the figure of a bearded divinity wearing an Eastern head-dress, and a garment covering his right arm, seated to right in a car with a winged wheel; the wing of archaic form, the wheel with six spokes and an inner ring around the axis. The left hand of the divinity is outstretched, bearing an eagle. Before the figure, in the right-hand lower corner of the square, is an ugly head. In the field, above the arm, the letters $\uparrow\lambda$, and behind the head to left γ . These are the Phoenician forms of the Hebrew letters י, ה, ו: *Yod, He, Vau*.


The coin was issued during the time that the Phoenicians and Philistines were ruled by Persian Satraps

residing in Sidon. Their rule lasted from about 540 to 351 B.C., when Sidon was utterly destroyed by fire, through the treachery of the Sidonian king, Tennes, who was slain by Artaxerxes III, called Ochus. The coin appears, from its style, to be earlier than the reign of Tennes, whose coins are figured in M. Babelon's work on the coins of the Phoenicians. The story of the fall of the city is told by Diodorus Siculus (xvi. 40-44).

The weakness of the Persian rule had caused the Phoenicians to think it possible to shake off their yoke, and four thousand Greek mercenaries were hired by the Sidonians to assist them. From the style of the coin it was probably issued between 405 and 380 B.C., and the Semitic character of the reverse type is what we might expect from the Phoenicians or Philistines of Gaza after they had given up issuing coins in imitation of the Athenian "owls," when the naval power of Athens was broken in 404 B.C.

The Phoenicians and Philistines, however, were still under the influence of Greek art, and hence we see the curious and interesting combination of Greek and Semitic ideas in the type. Gaza was apparently not taken from the Persians until Alexander the Great besieged the city.

THE LEGEND.

If it were not for the legend  the type would be looked upon as a barbaric imitation of Greek ideas, but the legend seems to point to a Semitic meaning attached to the type. It is especially interesting as suggesting that the identification of Zeus with Jehovah was recognized about two hundred years before 168 B.C., when

Antiochus IV renamed the temple at Jerusalem. We learn from 2 Macc. vi. 1, 2 that "not long after this the king (Antiochus) sent forth an old man of Athens to compel the Jews to depart from the laws of their forefathers, and not to live after the laws of God; and also to pollute the sanctuary in Jerusalem, and to call it by the name of Zeus of Olympia, and to call the sanctuary in Gerizim by the name of Zeus the Protector of Strangers." From this passage we may understand that the Phoenicians, who had for many years been familiar with Greek religion and art, may quite naturally have represented a figure of Zeus on their coins, and added the Semitic name 𐤆𐤓 as more familiar to the Phoenician people. Each name expressed the idea of the supreme God.

In a similar way the figure of Zeus appears on coins of Tarsus, with the legend "Baal of Tarsus." Moreover, the figure of the Baal on those coins is very like that on our unique coin—each figure holds an eagle. The Baal, or Lord of Tarsus, was identified with Zeus.

Sidon and Gaza were emporiums for the commerce of both the East and the West, and it may have been found an advantage to include on their coin-types the religious and artistic ideas of both regions. We know so little of the religious ideas of that period that it is difficult to understand how this name, commonly associated with the race of Israel only, was used as a legend on a Phoenician coin. The name Jehovah was known, and used in building up names, in the days of Ahab, among the Sidonians, and some bring forth the name Jezebel as an instance; but that name is spelt 𐤍𐤕𐤁𐤏 , and signified either "unexalted" or "unhusbanded." Ahab gave his children names clearly compounded with "Jehovah," as

Ahaziah, Jehoram, Athaliah. These names, however, were given in the land of Israel, and not by Phoenicians.

The origin and history of the name Iahve is still disputed. It does not appear certain that there is any connexion between the word "Jah," found in the Assyrian tablets and the name of the God of Israel. There is evidence that the name was known to the Israelites before Moses sent his message to say who sent him; for his mother's name, Iochebed, is a compound with that name, and a new name would have been to Israel in Egypt a new god. The Mosaic interpretation of the name as formed from the verb "to be" is that accepted by Israel, whatever other Semites may have thought as to its connexion with a root signifying "blow," and indicating the god of storms. If the wing on the chariot-wheel has reference to the God "who rideth on the wings of the wind," it would be a reminiscence of Semitic ideas of a date later than the days when Jehovah was worshipped in the southern peninsula, but earlier than the date of this coin. The trilateral form in which the name appears on this coin, instead of the tetragram of the Hebrew Scriptures, has been recently found in the Aramaic papyrus, discovered at Assuan, and edited by A. H. Sayce and A. E. Cowley in 1906.

This papyrus shows that the trilateral form of the name was used by the Jews themselves. Although the Aramaic papyrus was found in the south, the language was that of the north, and was no doubt well known in Sidon and Gaza.

Canon Driver, writing about the recent excavations at Jericho, mentions the fact that "nine jar handles inscribed with the letters η , and two inscribed with the letters $\eta\eta$, in characters pointing to the fourth and third

centuries B.C., were also found. These are considered by Professor Sellin to be the sacred name Yah and Yahu . . . used regularly in the Aramaic inscriptions from Assuan and Elephantine" (*Guardian*, Feb. 17, 1909, p. 241).

It is most probable that the coin bearing this sacred name was issued from Gaza, which had been the chief city of the Philistines, who would be familiar with the name of the God of Israel. Gaza was in the territory of Judah, and the acknowledgment of this name as that of the supreme God is less surprising in this southern city than among the Sidonians. Mr. T. Tyler, in his article on "The Origin of the Tetragrammaton" in the *Jewish Quarterly Review* above mentioned, notices that there was much intercourse between Crete and Gaza. He notices a coin of Crete of the time of Hadrian bearing a Semitic title of the God of the Cretans, Maran, meaning "our Lord." The name is familiar to us from the word *Μαραθα* used by St. Paul (1 Cor. xvi. 22). It is evidence of the many titles and names used to express the one idea of the supreme God, Maran, Baal, Zeus, Iahve.

Semitic scholars are not agreed as to whether the shorter forms of the name, יה or יהו, are earlier or later than the fuller form, יהוה. The opinion that the shorter form is earlier is growing, and the jar handles and papyri together with the legend on this coin point, at any rate, to the wide diffusion of the trilateral form of the name.

M. Six and M. Babelon refer the legend יהו to the god 'Iaô, a deity very seldom mentioned; even in Roscher's Lexicon only four references are given.

1. To Diodorus Sic. (i. 94. 2), who states that 'Iaô is the same as the Jehovah of the Jews.

2. To Lydus, or Johannes Laurentius, who wrote, in the early part of the sixth century A.D., a work *De Mensibus* (περὶ μῆνων), in which he says the Chaldaeans call their god 'Iaṓ, signifying "the Light of Intelligence" in the Phoenician tongue. Roscher says this god was Dionysos.

3. To Macrobius (*Sat.* i. 18, 20), who relates an oracle of Apollo Clarius, who is called 'Iaṓ.

4. To a magic papyrus published by Parthey (*Abh. d. Berl. Ak.*, 1866, 3, 109 ff.).

It will be noticed that all these references to this form 'Iaṓ are of much later date than our coin, but the earliest reference, that of Diodorus, identifies 'Iaṓ with ἵππ. The adoption of ΙΑΩ by the gnostics is discussed by C. W. King, in his work *Early Christian Numismatics*, p. 227.

THE REVERSE TYPE.

In the article in the *Proceedings of the Soc. of Biblical Archaeology* mentioned above, Mr. E. J. Pilcher suggests that the winged wheel may have been, possibly, a reminiscence of the vision of Ezekiel. From the similarity of the type with certain copper coins of Eleusis, and with the winged cars on the Greek vases of that period, it will appear far more probable that the mint engraver was either a Greek copying a Greek type, or a Phoenician pupil of some Greek engraver. In the great *Atlas der griechischen Kunst-Mythologie* of J. Overbeck, on Tafel XV. we find a winged car (which is here reproduced, see Fig. 2), bearing the god Triptolemus, very similar to that on the silver coin of Gaza. The date of the vases and of the bronze coins of Eleusis is early

enough to make it probable that they gave the idea to the coin-engraver of this piece. It would not follow



FIG. 2.

that the Phoenicians thus desired to represent Triptolemus; they wanted a winged chariot, and found one, which they copied without regard to its Greek signification. Wings were familiar to Semites, as emblems of divinity, from the Assyrian sculptures. Moreover, from the legend יהוה, we see how suitable the type must have appeared to represent Him who "was seen upon the wings of the wind" (2 Sam. xxii. 11), and of whom the Psalmist said, "He did fly upon the wings of the wind" (Ps. xviii. 10), and references to wings are found in other Psalms, such as lxi. 4; lvii. 1; xci. 4. Moreover, in Ps. civ. 3, we have reference both to the chariot and to the wings, "Who maketh the clouds His chariot, who walketh upon the wings of the wind." This Jehovah of the Hebrews was identified with Zeus by the Phoenicians, and the type expresses the combination of ideas naturally and simply.

When we turn from the central or main type and look at the ugly head which is placed before the seated figure of the god, we see there another reason for recognizing the heathen character of the type. This head has been identified by some with that of Bes, a figure often found among Phoenician terra-cotta remains. Bes is also said to have been frequently seen on the prows of the Phoenician galleys. Another interpretation of this head has been suggested, viz. that it is the figure of a headland called *Θεοῦ πρόσωπον*, a spur of the hills of Lebanon near the coast, mentioned by Strabo (xvi. 2. 15): "contiguous to Tripolis is Theoprosopon, where the mountain Libanus terminates;" and further on: "Tripolis has its designation from the fact of its consisting of three cities, Tyre, Sidon, and Aradus." The headland, which bore the form of a face, may be perhaps signified by the massive-looking head on the coin in which we are interested, and if this is thought a right or probable signification of the head, then it would be a sign of the city Sidon, and go to show that those are right who regard the coin as minted in that city. This interpretation of the type cannot be held by those who regard the coin as having been issued from Gaza.

M. Babelon regards it as probably issued from Gaza on account of the head being attributed to Bes.

There is still another possible interpretation of the head, viz. that it represents the goddess of the Phoenicians who was called Teneth, תנח, or Pen Baal, פנ בעל (cf. p. 441, *Corpus inscr. Sem.*, Nos. 416-420). Pen Baal was the wife of Baal, cf. 37; and *Text-book of North Semitic Inscriptions*, Rev. G. A. Cooke. But the head on the coin is so like that of Bes that the attribution to Teneth is not so likely to be correct.

THE OBERSE TYPE.

The helmeted head on the obverse of our coin shows how entirely Greek and heathen was the idea of the god in the mind of the die-engraver. There is usually some connexion between the types of the obverse and reverse of Greek coins, but in this case it seems hard to imagine how the engraver should have depicted the thoroughly Greek head on the obverse as belonging to the Semitic-looking deity on the reverse. It has been suggested that if the head were regarded as that of מלכרת (Melkarth), the reputed ancestor of the Kings of Sidon, who was identified by the Greeks with their Heracles, the difficulty of finding a connexion between obverse and reverse would be solved, and this would be a case, like many others, in which the ancestor of the founder is represented by the head on the obverse. The origin of the name Melkarth is not settled. Some derive it from the words "king" and "Carthage," others from "king" and "land." This latter derivation is the only one which could be made applicable to the head on a coin of Gaza.

The hero or founder of that city is unknown, and it therefore seems more probable that the head was regarded as that of a deity.

The association of gods with war was common in ancient times, not only among the Greeks, but also among the Semites, and those who adopted their cult of Iahve as well as among the Jews. We read in Exod. xv. 3, "Jehovah is a man of war;" and Isa. xlii. 13, "He shall stir up jealousy as a man of war."

Another suggestion as to this type has been made by M. Six and M. Babelon, which does not seem to me as probable as these, viz. that as the head is very similar to

that on the coins of the Mamertini bearing the legend AAPANOY (see Fig. 3), we have here a representation of a Phoenician god Hadran, who was devoted to dogs, which were kept in his temple in Sicily. But the legend on the coins of the Mamertini in the British Museum is scarcely legible; moreover, they are of later date than this coin of Sidon. The bearded head of a warrior in a helmet is a common type, and we need the help of a study of the reverse to enable us to decide who the warrior was intended to represent.



FIG. 3.

In conclusion, the resemblance of the reverse type to the vision of Ezekiel is not shown to have been made intentionally by the Sidonians, but there is in the vision of Ezekiel and in the coin-type a reference to the same Semitic poetical imagery seen in the verses of the Psalms and elsewhere in the Old Testament, and the idea was more commonly diffused among the Semites than is generally supposed. The same remark applies to the legend *IAHVE* as to the type of the winged car; the coin bears witness to the dissemination of the name *Iahve* beyond the tribes of Israel.

A. W. HANDS.

VII.
THE COINAGE OF THE REIGN OF
EDWARD IV.

(See Plates IX.-XV.)

MUCH has been written at various times by different authorities on the coins of this reign, but all has been of a more or less partial and incomplete nature, so far as I am aware. This is probably due to the great abundance of the coins, and the variety of the issues both from the royal and ecclesiastical mints, which makes the task of dealing with the subject in anything like a complete manner more than usually tedious and difficult. I am, however, induced to attempt it, although I have long hesitated, owing to the large amount of repetition that is unavoidably involved.

A brief outline of the reign of Edward IV, with special reference to the events which may have some bearing upon the subject of the coinage, is perhaps desirable as a prelude, and may not be considered out of place.

The weak character of Henry VI had, especially during the latter years of his reign, gradually caused attention to be drawn to the defective title to the throne which he had derived from his father and grandfather, and to the fact that Richard, Duke of York, was the heir by hereditary right of Richard II. In the Parliament assembled at Westminster in October, 1460, the duke formally

claimed the crown, and the Lords, after several debates, resolved that his title could not be disputed. The pathetic appeal of Henry VI, when they waited upon him, "My father was king, his father was also king; I have worn the crown forty years from my cradle; you have all sworn fealty to me as your sovereign, and your fathers have done the like to my fathers; how, then, can my right be disputed?" was not without some effect; and in order to save their oaths and clear their consciences they refused to proceed to the step of dethroning him, but proposed, as a compromise, that Henry should retain the crown for life, and that the duke and his heirs should succeed to it at his death; and to this both parties at Westminster agreed. The award was, however, scarcely made before it was broken, as the queen, who with the aid of the chief Lancastrian lords had assembled a large army at York, refused to abide by it. The duke, who hastened north to oppose her, was defeated and slain near Wakefield, and his rights devolved upon his son Edward, Earl of March, who was then at Shrewsbury. The Earl of Warwick, the duke's nephew, was in possession of London, having the king (Henry VI) in his custody, and Edward, on learning what had occurred, hastened to interpose an army between the queen's forces (which were advancing southwards) and the capital. On his way he obtained the (for him) vitally important victory of Mortimer's Cross over Jasper Tudor, the king's half-brother, and it was before this battle that Edward thought he saw in the heavens three suns that coalesced into one blazing one, which he interpreted as an omen of victory. He was now able to unite his forces with those of his cousin, the Earl of Warwick, and triumphantly entered London on the 27th of February,

1461. Edward was only in his nineteenth year, and his handsome person, and the fame of his recent success, rapidly increased his popularity. Nevill, Bishop of Exeter, brother of Warwick, harangued the people on his just title, and at a great Council it was resolved that Henry VI had forfeited the crown to Edward as heir to the late Duke of York. Edward was proclaimed immediately by the heralds in various parts of the city, and on this day, March 4, 1461, the reign of Henry VI was ended. The new king was, however, unable to remain in London, and was obliged to advance rapidly northward to engage the powerful Lancastrian forces still in the field. The victory of Towton fixed the crown firmly on his head, and after triumphantly entering York he proceeded to Newcastle, receiving everywhere the homage of the people. For the next two years, until the battle of Hexham and the capture of the unfortunate Henry VI, the country remained somewhat unsettled, but then Edward and his advisers were at last able to think of other matters than war. The late king was imprisoned in the Tower, but as his son and the queen had escaped, nothing was to be gained by taking his life.

In April, 1464, Edward married Elizabeth Wydeville, widow of a fallen Lancastrian knight, and the rapid advancement of all the members of her family gradually aroused the jealousy of the powerful Nevill family, and ended in a complete estrangement between them and the king. George Nevill, Bishop of Exeter, had been made Chancellor at Edward's accession, and in 1465 he was translated to the Archiepiscopal See of York. He had great influence with the king until the rise of the queen's family, when he fell into disfavour, and was deprived of the seals about three years after being raised

to the archbishopric. With his brother Warwick he was apparently reconciled to the king for a time, but by 1469 their antagonism to the queen's relatives had become acute. Edward's popularity was now beginning to wane. "Complaints of the king's faithful Commons and true subjects," which enumerated amongst other grievances that he had "debased the coin," were largely circulated amongst the people, and a formidable insurrection in Yorkshire seriously shook his authority. After being drawn away from the capital by a ruse of Warwick and his party, the imprisoned Henry VI was suddenly liberated and restored to the throne in his absence, and Edward found himself compelled to take refuge in Holland under the protection of his brother-in-law, the Duke of Burgundy. Here he remained for the next seven months, during which time the country was again governed in the name of Henry VI.

The restoration of Henry VI affords a convenient opportunity for dividing the consideration of the coinage of the reign of Edward IV, which, for convenience, I propose to deal with in parts, of which the first will end at this period.

When Edward, by his rapid advance to London after the second battle of St. Albans, obtained possession of the throne and the capital, he would doubtless, during his brief stay before again proceeding northward against the Lancastrians, have arranged for the coinage of money in his name, as the profits of so doing would have been at this juncture specially important to him. The latest coins of Henry VI, with the lys on the neck, must have been almost in the actual course of striking on his entry into London, and the haste with which it was necessary to proceed accounts for there being no change in any

details but the king's name on the earliest coins struck by the authority of Edward IV, which I assume were issued immediately after his entry into London. In support of this theory, it may be mentioned that his first great seal is merely a debased copy of the "Bretigny" seal (which had continued in use until the deposition of Henry VI), evidently executed hastily, and no doubt immediately after his proclamation. This seal, according to Wyon, was only in use for about ten months up to about December, 1461, and this is probably also the period during which the coins bearing the name of Edward, but otherwise in almost all respects exactly corresponding with the latest ones of Henry VI, were struck. It may here be well to describe the noble and groat of the latter, which were so closely copied by Edward IV. The noble, which, owing I regret to say to a misunderstanding on my part, I omitted to describe in my paper on the gold coins of Henry VI, is in the Evans Collection, and is probably unique. It is described by Kenyon, but is by him ascribed to the "pine-cone" coinage (No. 7), which caused me to overlook it. It should be located in what has been designated Class VI, or the "cross and pellet" coinage, at which period, according to the mint accounts given by Ruding, only 49 lbs. 5 ozs. 5 dwts. of gold was coined. The description is as follows—

Obv.—• h • EDRIC A DI • GRA • REX • ANGL & FRANC DNS hY King in ship as usual; two ropes from stern, one from prow. Ship ornaments, lys lion, lys lion, lys lys, between leaf and annulet under shield.

Rev.—Mint-mark, lys. IhA x AVT x TRANSIENS PER MEDIVS ILLORY IBAT Usual floriated cross with h upside down in the centre. The lys under

the shield distinctly marks this noble as being contemporary with the groat with the lys on the king's neck, but I am inclined to think, from the trefoil in the obverse legend, that the die was actually made for a somewhat earlier issue, the lys being punched in later. [See Pl. IX. 1.]

The latest groat of Henry VI has for obverse: mint-mark, cross fleury, $\eta\epsilon\alpha\alpha\alpha$ DI GR π \times REX ANGLI FR π ND, lys on king's neck immediately under the chin, pellets at side of crown; reverse: mint-mark, small lys, POSVI D ϵ V α M π DIVTOR ϵ \times M ϵ V α M CIVIT π S LONDON, extra pellets in second and fourth quarters [Pl. IX. 2]. Some specimens are without the lys on the reverse. I believe that this latest variety of groat of Henry VI was unknown or unremarked previous to the Stamford find, and even now no half-groats or smaller coins with the same characteristics have been discovered bearing the name of Henry.

It is safe to assume that the coins of Edward IV bearing the special marks of the last noble and groat of Henry VI, viz. the lys under the shield in the case of the former, and on the neck in that of the latter, were struck from dies prepared immediately after his accession, by the use to a large extent of the same punches as had served for those of his predecessor, and that the coins with these characteristics continued to be issued through the unsettled period during which his first hastily prepared great seal was made to serve, which, as we have seen, was about ten months. By far the most interesting pieces of this period are the two nobles (so far the only known specimens), of both of which Sir John Evans was the fortunate possessor. Although connected with the latest noble of Henry VI by the lys under the shield, they corroborate my suggestion of the

latter coin being from a somewhat earlier die adapted by the addition of the lys under the shield to the earlier mark of the leaf. These early nobles of Edward IV, unlike the silver coins of the same period, differ in other details than the name from those of his predecessor. The first may be described as follows: obverse, EDWARD^{I} $\text{DI GRAT REX ANGL}^{\text{I}}$ $\text{\& FRANC DNS}^{\text{I}}$ - hYB ; usual figure of the king in ship with a lys below the shield and a pellet on either side of the crown. The ship, unlike that on all previous nobles, has no rudder, and has four ropes from the stern and two from the prow, instead of two from the stern and one from the prow, as on the Henry VI noble; and there are fewer and less carefully executed lines of waves under the ship. The reverse has the lys mint-mark as on all nobles of the last reign, and reads $\text{IHU AVT}^{\text{I}}$ $\text{TRANSIENS PER MEDIUM ILLORVM}^{\text{I}}$ \times IBAT , usual floriated cross as on previous nobles, with \& with pellet in front in the centre [Pl. IX. 3]. The second noble differs from the first on the obverse by having a pellet on one side of the crown only, and on the reverse by having the \& in the centre of the cross struck over an h upside down, which is the position of this letter on the latest Henry VI noble, which it is interesting to note was found together with that of Edward IV. Of this earliest coinage there are, so far, no known examples of a half or a quarter-noble, and we come to the consideration of the silver coins, of which examples are known in every denomination from the groat to the farthing, although some are of the first rarity. All are distinguished by the same characteristics that are to be found on the latest groat of Henry VI, which consist of the lys on the neck, the pellets on either side of the crown, and the additional pellets in the first and third quarters of the reverse. The mint-mark is

always either the cross fleury (as on the last Henry VI groat) or a plain cross such as we find on the latest half-groats which we have of Henry VI with the saltire cross on the breast. The most curious feature of these early coins of Edward IV, and one which indicates the hurriedness and inattention with which they were undertaken, is the continuation of the special badge or mark of Henry VI, in the lys on the neck, which we only find on his groats, but which is extended to every denomination of the first coins of Edward IV. The groats of this issue were rare previous to the great find of groats at Stamford in October, 1866, but have been less so since, as the hoard included a considerable number of them in very fine condition. They read, EDWARD DI (or DEI) GRAT REX ANGLIÆ. FRANC, or ANGLI FRANC omitting the Æ which is usually the reading on the latest groats of Henry VI. The half-groats are very much rarer than the groats, and, in fact, very few are known. They occur with both the plain cross and the cross fleury mint-marks. The penny of this coinage was until recently thought to be unknown, although an unmistakable specimen is described in the Cuff Catalogue (lot 902), but without any remark, and what is probably the same coin subsequently appears in the Catalogue of the collection of the Rev. E. J. Shepherd (lot 183), but is there described as of the *light* coinage, although the lys on the neck is specially mentioned. This coin next appeared at the sale of the Brown Collection, and subsequently was exhibited at a meeting of our Society by Mr. L. A. Lawrence. Its weight is 12 grains. It is now in the cabinet of Mr. Bernard Roth. It reads, EDWARD × REX ⬠ ANGL < FRANC, and has a lys on the breast and a pellet on each side of the king's crown. Another specimen, exactly similar, but weighing

14·25 grains, is in the collection of Mr. W. M. Maish, of Bristol. These two examples are, however, the only pennies of the coinage at present known. Several specimens of the halfpenny are known (of which I myself possess one), but they are extremely rare. The mint-mark is a plain cross, and they read, EDWARD REX ANGE, with lys on the king's neck and pellets on either side of the crown. The farthing of this coinage is known, but I have only been able to trace one example which can be unmistakably identified with it. This was in the Shepherd Collection (lot 182), and subsequently in the Montagu Cabinet (lot 610 in Sale Catalogue). It is described as having the lys on the king's neck and the pellets at the sides of the crown and in two quarters of the reverse, which leave no doubt as to its correct attribution. Its weight is given as 3½ grains. Several very rare and neatly executed farthings with a cross as mint-mark, and bearing the name of Edward, but without other distinctive marks, have been attributed to the heavy coinage of Edward IV. In my opinion these farthings, to which I believe Mr. Neck first drew attention (*Num. Chron.*, N.S., Vol. VII. 43), really belong to the latest coinage of Edward III. Their neat workmanship corresponds with that of the coinage to which I refer, while they resemble exactly (except in the name) farthings of Richard II. What, however, appears to me conclusive is that nearly every specimen has the Roman N in "London"—a most improbable feature on any coin so late as the reign of Edward IV, seeing that it does not occur on a farthing of any previous reign subsequent to that of Edward III. The specimen in the British Museum, it is true, has English N's, but it is identical in other details with one in my own collection with Roman N's.

Mr. Neck's specimen, according to the illustration, had an English *Ń* on the obverse and Roman *N*'s on the reverse. The only point in favour of these farthings belonging to Edward IV is their weight, which in none of the four specimens that I know of exceeds $3\frac{3}{4}$ grains, although all are in fine condition and well struck. An exactly similar farthing of Richard II in my collection, however, only weighs $3\frac{3}{4}$ grains, but is in fine state, and just as struck. It has English *Ń*'s on the obverse and reverse.

THE ROSE MINT-MARK.

About December, 1461, a new and handsome great seal was made (according to Rymer, in gold) to supersede the one we have previously noticed, and one of its special features was the introduction of the king's special badges of the rose and the sun in splendour—the former as being the emblem of his house, and the latter the special cognizance which he adopted after the battle of Mortimer's Cross, where, according to Hollinshed, he "met with his enemies in a faire plaine neere Mortimer's Cross, not far from Hereford east, on Candlemasse daie in the morning, at which time the sunne (as some write) appeared to the earle of Marche like three sunnes, and suddenlie joined altogether in one. Upon which sight he took such courage that he fiercelie setting on his enemies put them to flight; and for this cause men imagined that he gave the sunne in his full brightnesse for his badge or cognizance." The field of the reverse of this new seal is diapered with a rich pattern of quatrefoils enclosing roses, the intermediate spaces being filled with suns in splendour, and the date of its making

no doubt marks the time when it was determined to emphasize in a special manner the triumph of the house of York in the person of Edward, and to do away, so far as the great seal and the coinage was affected, with all reminiscences of the house of Lancaster; for although the *red* rose was the emblem of the latter, it never appears to have been used as such in ornament, the fleur-de-lys being always employed as the emblem of Henry VI, so far at least as the coinage is concerned. We may therefore, I think, safely assume that it was at this period that the rose, as the recognized emblem of the house of York, was adopted as the mint-mark on all the coins, the cross mint-mark (whether of the fleury or plain type), together with all other emblems or marks connected with the coins of the previous reign, being entirely superseded. Under the date of 1461, Ruding says: "The continuator of the *History of Croyland* relates that the money, both gold and silver, of the three Henrys was now changed and recoinéd, in order that the name of Henry might be erased from it." Although this statement is evidently not strictly accurate as regards the *recoining* of the money of the Henrys, it most probably has reference to the change effected by the introduction of the rose (the badge of the house of York) as a general mint-mark on all the coins, and the exclusion of Henry VI's badge of the lys, which must have been continued by inadvertence during the first ten unsettled months of Edward's reign. No doubt in times when few could read, these emblems or badges counted for more in the eyes of the masses than we may now imagine, and the removal of the emblem of the former king, and the substitution of that of his successful rival, may have been likely to appeal more forcibly to the

imagination of the people in those days than the mere change of the king's name. The great importance attached to the rose, as pre-eminently the badge of himself and his house, on the coinage of Edward IV, as compared with his personal badge of the sun, is shown by the fact that whereas the latter was only used once as a mint-mark, and that some time after the introduction of the former, the rose must have been exclusively in use (assuming that I am correct as to the date of its introduction) for quite four years at first, and, as I hope to show later, was revived both at the London and Bristol mints, and more particularly on the episcopal coins of Canterbury, York, and Durham, subsequently to the restoration of Henry VI in 1470, and remained in use up to practically the end of Edward's reign. It varies in detail and character on coins from various dies of the heavy coinage, but is always a five-leaved flower, and I think there can be no doubt as to its being in all cases intended to represent the same object.¹ Sometimes it takes the form of a neat pierced rosette, very similar to those on the "rosette" coinage of Henry VI; but more generally it represents a regular conventional full-blown rose, usually large, but occasionally small, having the centre sometimes pierced or sunk, but more often with a rounded button. This latter is probably the latest variety, as, in addition to being more generally found on the heavy coins, it is continued on the light coinage almost without exception. With the rose mint-mark, another almost invariable feature was introduced, viz. a quatrefoil at each side of the king's neck on the

¹ Probably these varieties of the rose merely indicate the work of different hands employed upon the dies.

obverse of all the silver coins. I am unable to suggest any meaning for this, although it found such favour as to be continued throughout the whole of the first period of the rose, and also of two of the succeeding mint-marks. Perhaps it was desired (now that marks of some sort had been so long the custom) to have something different to anything associated with the previous reign.

No gold coins with the rose mint-mark are known previous to the issue of ryals in 1465, after the great reduction in weight of the coinage, so we may pass at once to the consideration in detail of the silver coins issued previous to 1464, up to which time, as is well known, their weight was at the rate of 60 grains to the groat. The practically invariable obverse legend on the groats is EDWARD DI GRÆ REX ANGL' & FRANC, and the obverse and reverse mint-marks are always one or other of the varieties of the rose. We no longer find the pellets at the sides of the crown on the obverse, or in the first and third quarters of the reverse; but in place of the discarded fleur-de-lys we find the cusp of the tressure on the breast, terminated sometimes by a crescent, or more often by a small trefoil of pellets, although in many cases the cusp is terminated by an ordinary fleur like the others, or is without anything. I must acknowledge with reluctance my inability to suggest any meaning for the trefoil, but although it would be interesting to think that it had some special significance, I am inclined to believe that, like other similar objects to which I shall allude later, it is merely one of the privy marks of the mint officials, which appear to have become more frequent after the introduction with the rose of regular mint-marks evidently connected

with the Royal House. The crescent, I think, may have a meaning of some interest. It was the well-known badge of the powerful house of Percy, whose secret or open support had mainly kept alive the Lancastrian cause in the North. On April 25, 1464, the power of this house was finally broken at the battle of Hedgeley Moor, where Sir Ralph Percy, the acting head of the Percys, was killed. As this event led to the final triumph of Edward over the last remnant in arms of the supporters of Henry VI, it may have been thought worth commemorating by the introduction of the Percy badge on the coins struck shortly after.

Another of these peculiar marks which frequently occurs on the reverse of the rose-marked groats has hitherto been called a *mascle*, but it is obviously quite unlike the *mascle* or elongated open lozenge of heraldry, which is found so distinct on the earlier coinages of Henry VI. It is not easy to find coins of Edward IV with this mark that are sufficiently well struck to be of much assistance, but I have two or three on which it is quite distinct, and my own opinion is that it is intended for a human eye. There is always a pellet in the centre to indicate the pupil, and I have one example where the upper lid is shown partially closed. In all instances the form is irregular, and is indicated by curved lines.

These eye-marked groats appear to be some of the latest of the heavy coinage, as this is one of the marks that is found on the earliest coins struck after the reduction in weight. A variety of groats with the rose mint-mark, which would appear to be the latest, has an annulet at each side of the king's neck, a feature for which I will venture upon a suggestion as to the meaning. On May 1, 1464, Edward married Elizabeth

Wydvile, and although the marriage was secretly performed, it was publicly proclaimed shortly before Michaelmas, at about the time that the reduction in weight of the coins was decided upon, and I suggest that the annulets symbolize the rings used in the old marriage ceremony, and were introduced as a compliment to the king and queen. The date of these annulet groats is proved by their scarcity in the heavy coins, and by their continuance into the light coinage.

Heavy half-groats with the rose mint-mark are known corresponding with all the varieties of the groat to which I have alluded, although in two instances they are apparently unique. That with the crescent on the breast I can only trace in the Montagu Collection (lot 606) from the Shepherd Collection. It is mentioned by Hawkins, but, as he implies, the crescent is doubtful. I myself have the only recorded specimen with annulets at the sides of the neck. It was formerly in the Neck and Webb Collections. An example with the trefoil of pellets on the breast was in the Montagu Collection (lot 607), and is illustrated in the Sale Catalogue.

Of heavy pennies with the rose mint-mark none have been so far published or were supposed to exist, but a specimen has recently come into my possession which supplies the missing link. It is of larger size than the ordinary light pennies of Edward IV, and is of neat work and well struck. It weighs 13 grains, but has a small piece broken out of the edge; this takes away two letters of the legend. If perfect it would have weighed quite 15 grains. The rose mint-mark is very perfect, and the inscription on the obverse reads, EDWARD DI GRA REX ANG . . There are two crosses

or quatrefoils, one on each side of the neck. Reverse, CIVITAS LONDO . . Where the fracture on the edge occurs there is space for the Ω and also for the "eye"-mark which was probably there. Two pennies with the rose mint-mark, and with annulets at the sides of the neck, are recorded, and may be of the heavy coinage. One is quoted by Hawkins from the Wakeford Collection, the weight being $11\frac{3}{4}$ grains, although the coin is described as clipped. The other was lot 188 of the Webb Collection; no weight is, however, given, although it is described as "one of the finest pennies known." A second specimen of the heavy penny with the rose mint-mark, almost exactly similar to mine, and weighing 13 grains full, has recently turned up, and is now in the collection of Mr. Earle Fox.

I have also a York penny of similar character, size, and legend, which, although not in very good condition, weighs 13 grains, but unfortunately the mint-mark is not visible. In the *Numismatic Chronicle*, Series III., Vol. IX. p. 193, Mr. Lawrence gives it as his opinion that the introduction of the $\text{DI GR}\pi$ into the legend of the pennies and smaller coins was a difference made with the commencement of the light coinage. This appeared to be a very probable theory in the absence of any heavy pennies with the rose mint-mark; but now that this one has been found, which also has the $\text{DI GR}\pi$ legend, I think that Mr. Lawrence will probably agree with me that this alteration in the legend was introduced, not with the light coinage, but with the rose mint-mark, when so many other changes were made. Even before the discovery of the penny, it had been noticed by myself and others that a certain number of halfpennies existed with the rose mint-mark and the $\text{DI GR}\pi$ legend,

which were fully of the weight required for the heavy coinage; but although they afforded grounds for doubt, it is not, as Mr. Lawrence very truly says, safe to base any theory on the weight of halfpennies and farthings, which in all reigns are to be found occasionally of excessive weight. I think, however, that we may now assume that these rose-marked halfpennies which are of the proper weight belong to the heavy coinage. At the same time, it must be acknowledged that some halfpennies with the rose mint-mark read as previously EDWARD REX ANGL, or occasionally ANGLIA. They are usually of the variety with annulets on the sides of the bust, while those with DIERA have crosses or quatrefoils, or in one instance ($7\frac{1}{2}$ grains) nothing. I can trace no heavy farthing which, in my opinion, can be attributed to the rose mint-mark issue.

In the same paper in the *Numismatic Chronicle*, Series III., Vol. IX. p. 196, Mr. Lawrence speaks of some Durham pennies which I agree with him in thinking should be attributed to the heavy coinage. Although they all fall short of the proper weight for heavy coins, they are very full for light ones. Two which I have weigh over 12 grains each, while I have no light pennies of Edward IV. (and I have some in fine condition) in my collection which weigh over 11 grains, and many considerably less. These Durham pennies are evidently struck from locally made dies, probably during the first unsettled years of Edward IV., and I should be inclined to think that they are not from the Episcopal mint. They are of the type of Hawkins, No. 352, but on the two heaviest of my specimens there is a large rose at the end of the legend on the side of the cross. The legend, EDWARD REX ANGLIA, corresponds with the earliest heavy coins of

London, as does the cross mint-mark ; and probably when the rose was introduced, the local makers, averse to change, added it to the legend instead of substituting it for the cross. These pennies read on the reverse DONOLI, and have a rose in the centre of the cross.

The York penny previously alluded to, which I have no hesitation in attributing to the heavy coinage, is unfortunately imperfect where the mint-mark should be, but it has the quatrefoils at the sides of the neck, and in size and general character corresponds with the London penny with the rose mint-mark, which no doubt should be there. The reverse is without the quatrefoil in the centre of the cross, and the coin is no doubt from the Royal mint, which, although apparently very inactive for some time past, would seem to have occasionally struck a few pennies. This York penny weighs 13 grains, and has probably lost a little through wear and clipping, although not very much. In connexion with the question of whether a coin belongs to the heavy or light coinage of this reign, it must always be remembered that with the possible exception of halfpennies and farthings, the coins very rarely, if ever, come up to their proper weight, and are usually appreciably below it. This is apparently more particularly the case with pennies, Mr. Roth's early "heavy" penny weighing barely 12 grains. However, the two which I have cited as examples are both of larger size and different character to any light pennies, which, together with their weight, leaves no doubt as to their correct attribution.

THE LIGHT COINAGE: THE ROSE MINT-MARK,
continued.

In 1464 it was decided to effect a similar reduction in the weight of the silver coins to that which had been carried out in the thirteenth year of Henry IV, and the weight of the penny was now reduced from 15 grains to 12 grains, and the coins of other denominations in proportion. This important change was carried into effect by an indenture with William, Lord Hastings, dated from "Stannford," on August 13. By this indenture the gold coins were provided to be of the same weights and denominations as before, but to pass at a higher value proportionate to the reduced value of the silver. None would, however, appear to have been struck, as with the exception of the two early nobles in the Evans Collection, which clearly belong to the first year of this reign, no gold coins of Edward IV are so far known which can have been struck earlier than 1465, when further developments in the coinage took place.² The decision to reduce the weights of the silver coins left the rose in undisturbed possession as the sole mint-mark, and at first we even find groats, at least, of the reduced weights which are evidently struck from dies of the heavy coinage, examples of the variety with the trefoil of pellets on the breast being

² I have recently acquired a remarkable quarter-noble, or quarter-ryal, weighing only 24 grains, which may possibly belong to the issue ordered by the indenture of 1464. The obverse mint-mark is apparently a rose, and there is a rose over the shield which is enclosed in a tressure of eight curves. EDWARD appears to be punched over hENRIC, and there is a lys after the name. The reverse has a rose as mint-mark, and the type is the usual one of the quarter-ryals of Edward IV. Owing to double striking, it is not possible to be absolutely certain as to the obverse mint-mark.

not very uncommon. Other early examples of light groats retain much of the character of the heavy coinage, and some of the special marks are continued, including usually the "eye" in the reverse inner legend, and on a few the annulets instead of the usual quatrefoil on either side of the bust. On one early example which I have there are neither annulets nor quatrefoils, but this is very exceptional. Occasionally at first the rose mint-mark is of the small pierced cinquefoil variety previously described. Although there are several varieties of light groats with these early characteristics, none are very common, which would appear to indicate that for a little time the light coinage was not very abundant. Before long, however, measures were taken for carrying out the work on a very large scale. This was probably in the following year, 1465, when a new and important change was made in the gold coins, which appears to have been also put into force with great vigour. This change consisted in the practical abolition of the noble as it had been since the thirteenth year of Henry IV, and the introduction of a new coin to be called a "ryal"—a term derived from the French, and probably adopted to avoid confusion with the nobles in circulation—which was to weigh 120 grains and to pass for ten shillings; while another new coin was ordered called an "angel," or a "noble angel," to weigh 80 grains and to pass for 6s. 8d., the current value of the former noble after the thirteenth of Henry IV, until 1464, when to correspond with the reduced weights of the silver coins it was ordered to pass for 8s. 4d. Although the ryals with their halves and quarters appear to have been immediately and continuously coined in large numbers, the striking of the "noble angels" would seem to have been deferred for

several years, perhaps owing to the difficulty of so soon making another change in regard to the old nobles, of which a vast number must have been in circulation, whilst their current value had been already regulated by the indenture of the previous year, so as to accord with the value of the new silver coins.

So soon as the important changes in the gold coins involved by the striking of ryals was decided on in 1465, it was evidently determined to effect, as completely and as rapidly as possible, an entire recoinage of all the money of both metals then in circulation. For this purpose, in addition to the mint in the Tower of London, new mints were established to assist in the work, at Coventry, Bristol, and Norwich, while that at York, which although apparently up to this time only worked in a fitful manner, was restored to the full vigour of the reign of Edward III, during the period when groats and half-groats were struck in such large numbers at it. The results of such general vigour in the work must have been prodigious, as even to this day the ordinary light groats of Edward IV are so common as to be numismatically almost worthless, unless for special condition or other reason. Probably at this time the enormous quantity of Calais and other groats of Henry VI, till then in circulation, practically disappeared, as I believe they are rarely found together with light coins of Edward IV. The fact of their being at the present day so abundant is no doubt due almost entirely to the concealment of very numerous hoards during the troubled times of the later years of the reign of Henry VI and the earlier part of that of Edward IV. One of the objects of this entire recoinage of the money in circulation throughout the country was, we may safely assume, the obliteration of the

name of Henry and the substitution of that of Edward. The new gold pieces also had the same object in view. Although the time-honoured design of the king in the ship was still retained, probably owing to its introduction by Edward III, strikingly new attributes were added. The large rose on the side of the ship and the banner with large & upon it on the obverse, and the sun in splendour with the rose upon it on the reverse, were objects well calculated to strike the imagination in those days, and to aid in impressing the people with the idea of the complete triumph of the house of York in the person of their present king. Edward's personal cognizance of the sun in splendour was now for the first time introduced on the coins, although, as we have seen, it had already been a feature on his great seal for several years. In a short time it was destined, temporarily at least, to entirely supplant the rose on the silver pieces. The large coinage commenced in 1465 found the rose mint-mark still in complete possession as the sole mint-mark, but it cannot have been retained for very long, as groats are the only coins on which it is common, and even these are less so than those with most of the subsequent mint-marks. Ryals with the rose mint-mark alone are decidedly rare. There is a specimen in the British Museum of neat work and carefully struck with the mint-mark on the reverse only, which now became the more usual custom. This coin reads on the obverse, EDWARD ⁊ DI ♀ GR ⁊ REX ⁊ ANGL' ⁊ S FRANC ⁊ DRS' I ⁊ B. In the curious rendering of the Irish title we have the earliest example of the omission of the h, which became usual from this time until the reign of Henry VIII [Pl. XI. 1].

The design mainly differs from the previous nobles in

the two important features of the large rose on the side of the ship beneath the king's figure, and the fringed square banners with the initial of the king's name at the stern, from which there are now three ropes instead of two as on the latest nobles of Henry VI and the two early ones of Edward IV. In all other details the new ryal exactly resembles on the obverse the nobles. The reverse of the ryal under consideration (which is the type of all that follow) retains the lions with crowns over them together with the floriated ends of the cross, as on the former nobles, but the cross itself is done away with and its place taken by the king's badge of the sun in splendour, with the rose of York in the centre. The legend reads (after the rose mint-mark), *INQ NVT* ♀ *TRANSIENS PER MEDIUM* ♀ *ILLORVM* + *I* + *BKT*. The stops on both sides are trefoils, and the concluding word in each legend is curiously divided by one of these stops.

With the exception of ryals, there appear to be no gold coins from the London Mint on which the rose mint-mark alone is found, unless the coin previously referred to on p. 150 be a quarter-ryal of this period, which tends to prove that it remained in use for only a short time after the commencement of the great re-coinage of 1465. A quarter-ryal in the British Museum has eight arcs to the obverse tressure, with a rose over the shield. It has the sun as mint-mark on the obverse, and the rose on the reverse. There is no sign of any alteration in the king's name. As previously remarked, groats are the only coins at all common which are attributable to this period. They show a distinct difference in character from the first light groats. The dies are smaller in size, to suit better the reduced weight of the coins, and there is a reduction in the length and size of the neck and

shoulders of the bust in consequence. The face and features also have a rounder and more youthful appearance, although of course quite conventional. The rose mint-mark is now smaller and always of uniform size and character. On a few of these late rose-marked groats there is a rose on the point of the cusp of the tressure on the king's breast. These groats all have the fleurs terminating the cusps very small, and formed of three pellets united as trefoils. In this they resemble some later varieties of light groats, but their position here is made certain by their having a dot between the pellets on the second quarter of the reverse, in the same manner as all the other late rose-marked groats. In the find at Clay Coton,³ which included 55 groats of Edward IV with the rose mint-mark, there were only three amongst them with the rose on the breast, and even this is, I believe, a larger proportion than is usually found. Of the ordinary groats without the rose, some have the cusp on the breast fleured like the others, while others have the point without ornament. One specimen of the otherwise ordinary groat without the rose on the breast, in the collection of Mr. Monckton, reads DI GRACIA. This remarkable reading is obtained by the use of smaller letters in the obverse legend. I have myself obtained a specimen of this coin, which also shows small lettering on the obverse.

Light half-groats with the rose mint-mark are very rare, and such important and complete collections as those of Mr. Montagu and Mr. L. A. Lawrence do not appear to have included one. I have in my cabinet a specimen of the early variety with annulets at the side of

³ *Num. Chron.*, N.S., Vol. VI. p. 180.

the neck, weighing 23 grains. It has the rose mint-mark on both sides, and, like the heavy half-groat of the same type, appears to be so far unpublished and unique. A specimen of the later variety, with quatrefoils at the sides of the bust, was in the Neck and Webb Collections (*Num. Chron.*, N.S., Vol. X. p. 48). I myself have another, which has the dot between the pellets in the second quarter of the reverse, as on the groats.

Pennies of the light coinage with the rose mint-mark and of the London Mint are very rare, and I have only seen one or two specimens. One of early character was in the Lawrence Collection (lot 408). It reads DEI GRÆ, and has a quatrefoil at each side of the neck. It has the "mascle," or eye-mark, before LONDON on the reverse.

Halfpennies with the rose mint-mark are also rare, but much less so than pennies. They exactly resemble those of the heavy coinage, and, as in the case of the groats, some of both heavy and light weight appear to have been struck from the same dies.

THE PROVINCIAL ROYAL MINTS.

In 1465 the newly established or revived Royal mints of Bristol, Coventry, Norwich, and York are recorded to have been at work, this being part of the great scheme for effecting the complete and rapid re-coinage of the heavy money until now in circulation. They struck probably all the denominations of both gold and silver, although in some instances no specimens of the smaller coins have so far been found to have survived to our time. The Royal mints were also revived at Canterbury and Durham, the former striking half-groats, pennies, and halfpennies, and the latter pennies only. With the

exception of the Canterbury half-groats, however, the output of these two mints appears to have been very small. The Ecclesiastical mints of Canterbury, Durham, and York now became increasingly active, the two latter supplying the bulk of the pennies for general currency, while nine-tenths if not more of the half-groats came from either the Archiepiscopal or the Royal mint at Canterbury.

The rose was still the exclusive mint-mark in use for the royal mints, as is proved by the ryals, which were not issued until 1465 ; but it was very shortly to give place to the sun, which must have come into use very soon after the commencement of the general re-coinage, as, with the exception of London groats, all light coins with the rose mint-mark *alone* are rare, although they are less so when it is found with another mint-mark on the other side.

This is perhaps a suitable place to correct a rather general mistake in regard to the rose mint-mark. As has been previously observed, the rose as the emblem or badge of the house of York was evidently thought of more importance than Edward's more personal cognizance of the sun, and hence, as I hope to show more fully later, it was again brought into use on his restoration after the death of Henry VI and the final overthrow of the Lancastrian cause. This is particularly the case in connexion with those provincial mints which continued working after this time, and examples of the rose will be found as a mint-mark on coins of Canterbury, Durham, and York, which from their character are undoubtedly of quite the latest years of this reign. There are also a few examples of both Bristol and London coins with the rose mint-mark which may with little hesitation be attributed to a date later than the death of Henry VI.

THE BRISTOL MINT.

No coins, either of gold or silver, appear to have been struck at this mint until the rose had given place to the sun as the chief mint-mark, or, if there were any such, they have not so far been discovered. Groats are found with the rose as the reverse mint-mark, but having the sun on the obverse. Ryals and half-ryals are also found having both the rose and the sun on the reverse, the latter occupying the chief position.

THE COVENTRY MINT.

As in the case of Bristol, no ryals or half-ryals appear to be known with the rose alone as a mint-mark, although it is found in conjunction with the sun on examples of both. In silver I have seen a groat with the rose as mint-mark both upon the obverse and reverse, but it had every appearance of being struck from locally made dies. It was of fine silver and apparently of proper weight, so that I think there could be no question as to its being a lawful coin. I have also in my own collection a contemporary forgery in base metal of a Coventry groat which has the rose mint-mark on both sides, showing that it must have been copied from legally issued coins in circulation. My own opinion is that no London-made dies were actually sent to any of the newly established provincial mints until the rose had given place to the sun as the *chief* mint-mark. This is in fact only what might be expected, as it is pretty certain that even at the London Mint the rose did not remain in use very long after the great re-coinage was undertaken. It was,

however, evidently *intended* to send rose-marked dies to Coventry from London, as we have curious examples of London groats with an obverse from a die intended for Coventry, with a α on the breast and a rose mint-mark. The α in every case is not, as with the later Coventry groats, in *place* of the fleur on the breast, but is punched *over* it, showing that the dies were really made for London, but adapted hastily for Coventry, and then, not being sent, were used after all in London. These groats, although rare, are sufficiently numerous to prove that they do not result from an accidental use of different dies, and it may be noted that no groat with a Coventry reverse is found with an obverse from one of the dies in question. [See Pl. XIII. 1.]

In the British Museum there is a Coventry groat having the rose mint-mark on the obverse, but it is without the usual α on the king's breast, and is from one of the ordinary London dies. It is uncertain whether the reverse mint-mark is a rose or a sun. The rose is found as a reverse mint-mark on groats with the sun on the obverse, as in the case of Bristol.

THE NORWICH MINT.

A ryal of Norwich with the rose mint-mark appeared at the sale of the Montagu Collection (lot 577), and was stated to be from the Cuff, Hastings, and Brice Collections. It would appear to be unpublished⁴ with this mint-mark; but, not having seen it or any other

⁴ Although reference is given to Ruding, *Suppl.*, Pl. vi. 24, the obverse only of the coin is there shown, while the mint-mark would be on the reverse.

specimen, I cannot say whether it appears to be from London or locally made dies.

Half-ryals (although very rare) are found of Norwich with the rose mint-mark only (on the reverse, as usual) but they are of rather rough work, and would appear to be from locally made dies. There is a specimen in the British Museum, and another in the Evans Collection.

As in the case of Bristol and Coventry, no groats, so far as I can discover, are found of Norwich from London-made dies with the rose mint-mark on both sides, although, as with the former mints, they are found with the rose on the reverse but the sun on the obverse. There would, however, appear to have been a few struck from locally made dies, as, in the case of Coventry, with the rose as a mint-mark on both sides. I have a specimen in my collection: it has *N* on the king's breast, and reads *NORVIC*. It is of rough and peculiar work, but the mint-marks and lettering are correctly and well formed. It is of fine silver, but weighs only $35\frac{1}{2}$ grains. It is, however, a good deal clipped [Pl. XI. 10].

THE CANTERBURY MINTS.

In his second and third years (1462 and 1463) Edward IV confirmed the claim of the Archbishop of Canterbury to three dies, which claim had been previously allowed by Henry VI in 1446,⁵ the title of the roll being "De tribus Monetariis cum tribus cuneis ad monetam

⁵ A Canterbury half-groat of Henry VI was in the Lawrence Sale (lot 337), and may have been struck from locally made dies in virtue of this allowance of the archbishop's claim, although it had the appearance of being a contemporary forgery.

fabricandam in Civitate Cantuar. concess. Archiep. Cantuar." (Ruding, vol. ii. p. 182). It would appear unlikely that the archbishop would trouble to claim a privilege which he did not intend to exercise when granted or confirmed, and this raises the question as to whether heavy coins were not struck at the Canterbury Archiepiscopal Mint. Even the second confirmation of the archbishop's right was in the year previous to the reduction of the weight of the coins, and I think it almost certain that money of the old weights was coined, although, like all heavier issues, it practically disappeared directly it was worth consigning to the melting-pot. It would appear (although I know of no record of it) that at this time the archbishop must have been granted the additional privilege of coining half-groats, as during the whole of Edward IV's reign the by far greater part of these pieces are from the Canterbury Mints, either Royal or Ecclesiastical, in about equal proportions. Acting on the belief that heavy coins might be found, I in time discovered two Canterbury half-groats each of which weighs fully 26 grains, and both are to some extent clipped and worn. Both have for mint-mark the archiepiscopal pall only, but the king's bust is exactly similar to that on the heavy London half-groats with the rose mint-mark, one of which in the British Museum is of the same weight (26 grains) as the two Canterbury coins. Very probably other Canterbury half-groats of heavy weight may be found if search be made, which will prove more conclusively what I have suggested than the ones I have instanced, although I think they go far towards proving the point when we remember how rarely coins of this period are found of quite full weight, even when they are in mint condition.

When the great re-coinage was undertaken so vigorously in 1465, Canterbury was apparently selected for the supply of half-groats, for although a few were struck at the London and other mints, they are all more or less rare, while those of Canterbury, whether from the Royal or Archiepiscopal mint, are fairly common, although specimens bearing the *early* rose mint-mark are very seldom met with.

THE ROYAL MINT.

Although a Royal mint existed at Canterbury from quite early times, we find no coins previous to those of Edward IV that can apparently be attributed to it of later date than early in the reign of Edward III, notwithstanding that we have record of both Richard II in 1381 and Henry VI in 1426 making appointments and issuing writs in regard to it. It would in any case appear not to have been working for a long time, until, with the re-coinage of Edward IV, it was again brought into activity. Half-groats of Canterbury with the rose as a mint-mark are fairly numerous, but almost all are of the later years of Edward IV, when the rose was so generally revived at those provincial mints which were still working. Very few examples, if any, are to be found from the Royal mint which can be attributed to the period when the rose was the sole mint-mark. I have one which *appears* to be of this period, with the rose on both sides, but it has a trefoil at each side of the neck—a distinguishing mark not found on coins from other mints until a later date—and I therefore feel uncertain about it. There is, however, some reason for believing that the various mint-marks of this reign

reached the provincial mints after they had been in use for a time in London, and that they were continued longer than at the Tower.

THE ARCHIEPISCOPAL MINT.

The see of Canterbury was occupied throughout the whole of the reign of Edward IV by Cardinal Bouchier, who was appointed in the reign of Henry VI in 1454. He endeavoured to maintain a position of neutrality in the struggle between the houses of York and Lancaster, and lived to celebrate the marriage of Henry VII to Elizabeth of York, by which they were at last united. His tomb in Canterbury Cathedral is ornamented with his well-known badge of the Bouchier knot, which is also the chief distinguishing mark of the coins issued from his mint. As he had obtained confirmation of his rights in 1462 and 1463, there is little doubt that most, if not all, of the Canterbury half-groats struck up to 1465 were issued by his authority. The earliest of these interesting coins have for the obverse mint-mark what is really the arms of the see of Canterbury, viz. an archiepiscopal pall and cross, although owing to imperfect striking or clipping the small cross in the fork of the pall is rarely visible. The archbishop's badge of the Bouchier knot is placed under the king's bust, and quatrefoils are found at the sides of the king's neck as on the early London half-groats. On the reverse of those which I take to be *heavy* coins there is no mint-mark, but on others of ordinary light weight the rose is sometimes found. Not many of these coins are, however, to be met with. One variety with the rose on the reverse has on the obverse the peculiar feature of wedge-shaped

objects in the field. These do not appear to exceed four in number, two on each side of the head, but they are not arranged regularly. I am unable to suggest any meaning for these marks. The coins having them omit the quatrefoils. One in my cabinet has the pall mint-mark on both sides. Another peculiar mark which is found on the reverse of all or nearly all of the earlier half-groats is what looks like a stalk curving out of the innermost circle into the centre of the group of pellets in one of the quarters—not always the same. This mark is not found on any coins from the Royal mint.

Although very few of these earlier half-groats from the archbishop's mint have the rose mint-mark in addition to the pall, they were struck when the former was in general use elsewhere, and therefore properly belong to the period covered by the rose mint-mark.

THE DURHAM MINT.

The pennies of rude workmanship to which I alluded in speaking of the heavy coinage (Hawkins, 352), are found of undoubtedly light weight, and as they are not very uncommon they were probably struck for some length of time. They have no episcopal marks, and I am inclined to think that they are from the Royal mint, which would have been revived and kept working to some extent during the earlier portion at least of the reign of Edward IV. Apart from these curious pennies, I can find none, either royal or prelatial, that appear to belong to the period of the *early* rose mint-mark. Bishop Laurence Booth, who then held the see, conducted himself, we are told, with such moderation and propriety during this difficult time, that he gained the esteem of

both the Yorkist and Lancastrian parties. This may perhaps account for his not applying for any dies during the first four years of Edward's reign.

THE YORK MINTS.

The Royal mint which existed here from early times appears to have been worked in a very fitful and irregular manner. Since the commencement of the reign of Henry VI, when for a very short time it was revived for the striking of gold and silver of all denominations, very few coins, and these only pennies, are to be found which may be supposed to have emanated from it. One of these unusual coins is the heavy York penny of Edward IV, to which I have previously alluded. With the commencement of the great re-coinage of Edward IV in 1465, the York Mint was vigorously revived, and continued actively at work longer than any of the other provincial mints, except perhaps that of Bristol. It issued both gold and silver of all values. We cannot *with certainty* identify any quarter-ryals, but probably those with the lys as mint-mark are of the York Mint. No farthings have been discovered.

The Archiepiscopal mint, which coined pennies only, appears to have long been actively at work, and since the time of Edward III supplied the greater portion of the pennies for the whole country. I have not, however, found any that can be attributed to the heavy coinage of this reign; but the mint did its full share of work when the light coinage was undertaken, and continued to do so until the end of Edward IV's reign.

THE ROYAL MINT.

Half-ryals with the rose mint-mark are known, although it is accompanied by the lys, which later on became the exclusive mint-mark for all coins but pennies. I doubt, therefore, whether any gold coins were struck while the rose was in sole possession.

It has long been assumed that the quatrefoil in the centre of the reverse cross on pennies of York is the mark of the Archiepiscopal mint, but I think there is strong reason for doubting this, at least as regards the reign of Edward IV, when the archbishops were so careful to have the initial of their names, with the key on either side of the king's head, on their coins. I shall, therefore, venture to assume that pennies without these emblems, and with mint-marks and distinguishing features found on coins from other Royal mints, although having the quatrefoil on the reverse, were not struck at the archbishop's mint. In accordance with this theory, I can instance pennies with the rose mint-mark from the Royal mint. They have no emblems in the field of the obverse, and read EDWARD DI GRÆ REX ANGL. The mint-mark is the early type of the rose, and one rare variety has also a rose on the breast of the king (Hawkins, 354), which may correspond with the London groats having the same feature. These pennies have the usual York quatrefoil in the centre of the reverse, but they differ from most of the York ecclesiastical pennies in being well struck on full-sized flans. No groats or half-groats of York appear to be known with the rose mint-mark, which seems to indicate that the pennies were struck so soon as the reduction in weight took place in 1464, but that nothing was done in regard to larger coins until the following

year, when, with the advent of the sun as a mint-mark, all the provincial mints were in full activity.

THE ARCHIEPISCOPAL MINT.

The see of York was up to 1464 held by Archbishop William Booth, at whose death in this year it was, through the influence of the great Earl of Warwick, conferred upon his brother, George Nevill, who was already Bishop of Exeter, and who was not yet thirty years of age at the time of his advancement to the archbishopric. Owing to Archbishop Nevill having been succeeded in 1476 by another of the name of Booth, it is not *quite* certain whether we have any pennies of the first Archbishop Booth, unless they are possibly those which I have ascribed to the Royal mint. He died in the same year that the reduction in weight of the coins took place, and it seems rather doubtful whether he would have had time to apply for and make use of new dies. There are, however, pennies having several varieties of portraits of the king with a B to the left and a key to the right of the neck, and all having the rose mint-mark. Some that have an apparently earlier type of bust—and they are better struck on larger flans—I think may very possibly belong to the first Archbishop Booth. His successor, Archbishop George Nevill, made abundant use of his privilege of coining, and his pennies with his mark of a 6 and a key in the field of the obverse are still common. They are, however, almost always so badly struck that one in anything like a fine and legible condition is rare. Some have the rose mint-mark of what appears to be the early variety. This would have been still in use when Archbishop Nevill was appointed,

and as he would doubtless lose no time in exercising his rights, his earliest dies would probably have been prepared before it had been superseded.

THE MINT-MARKS OF THE SUN AND THE CROWN.

When in 1465 the issue of ryals was decided on together with the great general re-coinage of the money then in circulation, the rose still retained the field as the exclusive mint-mark, but it must have been for a short time only, as very few ryals are found with it, and with the exception of groats of the London Mint, all coins either of London or the provincial mints with the rose *alone* are rare. At the time of the important changes and events of 1465 in connexion with the coinage, Edward was at last firmly seated on the throne with no rival to fear. Henry VI, feeble in mind, was safely imprisoned in the Tower. The hopes of the Lancastrians appeared to be completely extinguished, and the time seemed appropriate for bringing the personality of the king more prominently before the people through the means afforded by the new coinage. Accordingly we now find his personal badge or cognizance of the sun, which he assumed after the battle of Mortimer's Cross, introduced upon all the coins as the chief or only mint-mark for both the London and provincial mints. At first, however, although it replaced the rose in the chief position on the obverse of the silver coins, the latter was retained on the reverse, or in some secondary position. This arrangement may have resulted from a desire to show that the king reigned not only by hereditary right, but also by that of conquest, and by emphasizing this to afford those who still felt their allegiance due to the

late king, a justifiable reason for transferring it to the present one.

Coins in both gold and silver were struck not only at London, but at the provincial royal mints of Bristol, Coventry, and Norwich, having the new mint-mark of the sun in the chief position, while the old one of the rose was still retained on the reverse, although not for long, as comparatively few coins are found with both mint-marks. Occasionally an exception is found to the rule of the later mint-mark of the sun being on the obverse, but this is probably due to the accidental use of a former rose-marked obverse die with a sun-marked reverse. I have previously accounted for the London groats having a Coventry obverse with the rose mint-mark. The rose mint-mark does not appear to have been in use at York for any coins but pennies, and probably it had been discontinued before the existing Royal mint began to take part in the general re-coinage. The earliest York groats, therefore, have the sun on both obverse and reverse.

I have coupled together the two mint-marks of the sun and the crown, as they must have been in use simultaneously for a time. The sun undoubtedly followed the rose, and was at first in use alone for a certain period, as no coins of the provincial mints are, I believe, to be found with it in conjunction with the crown, but that the sun was in use during the whole time that the crown was in favour is proved by its being still found on coins having mint-marks of unquestionably later date than the crown. Occasionally, but very rarely, the crown is found as a mint-mark on coins of both gold and silver (groats only), which have the rose as well, but apart from these rare exceptions it is never found with any other mint-mark than the sun.

THE LONDON MINT.

Ryals, half-ryals, and quarter-ryals are found in abundance with both the sun and crown mint-marks, as are also groats; but all the smaller denominations of silver coins are scarce, or even rare, more particularly those with the sun mint-mark. During the later part of the time when the sun and crown were in use, a variation was introduced on the silver coins by the substitution of trefoils at the sides of the neck of the royal bust in place of the quatrefoils which had occupied this position since the introduction of the rose mint-mark. I can suggest no reason for these emblems, but they are useful for grouping coins of a certain period, which, owing to careless striking, wear, or injury, are unable to be identified by their mint-marks.

THE PROVINCIAL ROYAL MINTS: THE BRISTOL MINT.

One of the most important of the new provincial mints was that of Bristol. Ryals and half-ryals in gold, and groats, half-groats, pennies, and halfpennies in silver, are known, but only the ryals and groats are at all numerous, and even these are not common. The earliest coins of Bristol have the sun as the chief mint-mark, with the rose as a secondary one. The latter is found on the reverse of the groats, and to the left of the sun on the reverse of the half-ryal, while on the ryal the rose is placed on the reverse after *ILLORVM*. Groats and half-groats are found with the sun mint-mark alone, but I cannot trace an example of either the penny or half-penny. While the new mints of Coventry and Norwich

appear to have ceased coining before the crown mint-mark came into use, that of Bristol became more prolific. Coins of both gold and silver with the crown mint-mark are more numerous than those with the sun, and are of all denominations (except quarter-ryals and farthings) in both gold and silver. The half-groats are, however, rare, as are the half-ryals, while pennies and halfpennies are of great rarity. A curious feature of the Bristol silver coins is the various forms of spelling the name of the town, as will be found by consulting the list of coins at the end of this paper. The Bristol coins afford evidence that the sun mint-mark survived the crown, as it is found on, I believe, all the groats which have trefoils at the sides of the king's bust. These groats have all the characteristics of those of London, with the cross fitchée mint-mark (which is found on no Bristol coins), and I consider them to be the latest type struck at Bristol previous to the restoration of Henry VI.

THE COVENTRY MINT.

The new mint established at Coventry to assist in the great re-coinage appears not to have done very much, and to have been only active during the period previous to the introduction of the crown mint-mark, as no coins struck there have any other mint-marks than the rose or the sun. Ryals and half-ryals are found having both the rose and the sun together on the reverse as mint-marks, and ryals with the sun only. All are rare, the half-ryal particularly so, the only one that I know of being that in the National Collection. Groats are the most numerous of the coins struck at Coventry, and even these are rather rare. A so far unique half-groat is in the National

Collection [Pl. XIII. 2], and perhaps pennies and half-pennies are amongst the coins that were struck, although in such small numbers that, so far as is known, none have come down to us.

THE CANTERBURY MINT.

The Royal mint appears to have been fairly active in coining half-groats during the period when the crown mint-mark was in favour, and I am inclined to believe that it was the last one in use at Canterbury previous to the restoration of Henry VI. Very few examples are to be found of the sun mint-mark, and I can boast of no specimen myself from the Royal mint. A half-groat is, however, mentioned in the Lawrence Collection (421 in Catalogue), having the crown on the obverse and the sun on the reverse, with trefoils at the sides of the neck. The crown-marked half-groats all have either quatrefoils or trefoils at the sides of the neck, the latter being the later variety. Pennies are very rare. I have one with the crown mint-mark in fine condition, but it is the only one that I have seen. A halfpenny with the crown was in the Montagu Collection (lot 625), and this also is the only one I can trace, although probably the one described by Hawkins, with trefoils at the sides of the neck in the British Museum, *would* have the crown were it visible. Both my penny and the Montagu halfpenny have quatrefoils at the sides of the king's neck. Neither is described by Hawkins.

THE DURHAM MINT.

The Royal mint in this city was evidently worked to some extent up to the time of Henry VI's restoration, as pennies which are clearly not prelatical are found that

correspond, in everything but the name of the place of mintage, with those of London. I believe, however, that they are very rare, as I have only met with occasional specimens. All are well struck, and from London-made dies. One has the crown mint-mark and quatrefoils at the sides of the bust. Others with the crown mint-mark, which I also ascribe to the Royal mint, have a fleur-de-lys instead of quatrefoils at each side of the bust. I can suggest no meaning for these fleurs-de-lys, which appear strange on coins of Edward IV. I have found no regal coins of Durham with the sun mint-mark.

THE NORWICH MINT.

As in the case of Coventry, the new mint at Norwich appears to have rendered comparatively little assistance in the work of the new coinage. All the coins struck there are rare, and none are known with any later mint-mark than the sun. Ryals are found with this mint-mark, but I can trace no half-ryal. Groats are the only pieces with the sun mint-mark which are found in any number, and even they are the scarcest of the light groats of this reign. A half-groat of Norwich is figured in Snelling (Pl. ii. No. 38), and again in Ruding (*Suppl.*, Pl. iii. No. 15). The latter engraving is probably copied from the former. Hawkins, however, while quoting these two authorities, states that the coin is "not known." I have been so fortunate as to secure recently a fine specimen of this coin, and thus to prove that it really does exist, although so long lost sight of [Pl. XIII. 4]. My coin has no R on the breast, but otherwise it exactly corresponds with the illustration in Snelling and Ruding. Possibly the R there shown is an error due to the artist thinking

it *should* be there, as the letter of the mint-name is not found either on Bristol half-groats or on the unique Coventry specimen; and this Norwich example may perhaps be the same coin after all as that which Snelling illustrated. As we know that half-groats were struck, we may, I think, consider it probable, as in the case of Coventry, that pennies and halfpennies were also, and may be amongst those coins of which we may live in hopes of discovering specimens.

THE YORK MINT.

Although we know from the evidence of coins that the regal mint at York was at work in a small way during the period when the rose mint-mark was still in use, it was not until the advent of the sun that any gold or silver coins other than pennies appear to have been struck.⁶ York, however, took a leading part in the great re-coinage when the other provincial mints were established, and ryals, together with groats, are perhaps more numerous than from any mint other than London. Although both ryals, half-ryals, and groats are found with the sun mint-mark, and a few groats even with the crown, the well-known special York mint-mark of the fleur-de-lys was early introduced, and soon displaced both the sun and crown mint-marks. It at first appears in conjunction with one or the other, although rarely, and then becomes the exclusive mint-mark for the larger coins until they ceased to be struck.

⁶ An exception is a half-ryal in the British Museum with a rose and lys on the reverse, but I believe that these and other similarly marked provincial half-ryals are instances of a revival of the rose after its first discontinuance.

In some instances the lys is struck over the sun, showing that it displaced the latter, and there can be no doubt as to its being used at York, while both the sun and crown were in use at other mints. Although groats with the sun mint-mark are not very uncommon, half-groats are rare. One is mentioned in *Num. Chron.*, N.S., Vol. II. p. 149, from a find near Bury St. Edmunds about 1862, and is there described as being much worn; and another is in the collection of Mr. Fox. They are not described by Hawkins. The York pennies of this period, which I consider to be from the Royal mint, afford further proof that the open quatrefoil in the centre of the reverse cross is, as I have previously suggested, a mark that had become numismatically identified with the *City*, and not specially with the Archiepiscopal mint as has usually been assumed. Groats, half-groats, pennies, and halfpennies are found having the lys mint-mark in combination with trefoils at the sides of the king's bust. There can be no reason for separating the pennies from the other coins, although they *have* the quatrefoil on the reverse, seeing that there are exactly similar pennies with the lys mint-mark which, instead of the trefoils by the king's bust, have the usual archiepiscopal mark of Archbishop George Nevill [see Pl. XV. 6, 9]. The halfpennies to which I have just referred are not mentioned by Hawkins or any previous writer, but several are now known, although they are extremely rare [Pl. XV. 10]. All appear to be of this period, and have the lys mint-mark and trefoils at the sides of the bust, which would seem to place them at the latter part of the period when the sun and crown were in use elsewhere, or possibly slightly later still. As in the case of Bristol, I believe that the York coins with trefoils instead of quatrefoils at the side of the

king's bust are the latest type in use at the Royal mint previous to the restoration of Henry VI. The groats particularly resemble in everything but the mint-mark the cross fitchée groats of London.

THE CALAIS MINT.

Were any coins struck at the Calais Mint? As early as 1463, in consequence of a petition from the Commons, a statute was enacted containing several regulations respecting the staple at Calais, and providing that from the Feast of St. Michael next ensuing no persons should sell any wool, &c., to the said staple but for ready payment, one half to be in lawful money of England, or in plate or bullion of silver or gold; and that all the plate and bullion be carried into the mint at Calais to be coined. It has been generally assumed that nothing resulted from this regulation, but I think there are strong reasons to the contrary. Wyon describes a special great seal of Edward IV, for French affairs (presumably). It has a rose *en soleil* on each side of the pedestal of the throne, and each word of the legend on both sides is divided by fleurs-de-lys. Now, there are ryals, half-ryals, and quarter-ryals having the sun or crown mint-mark which are in detail very much in accord with this great seal, and I think there is good reason for supposing that they were struck at the Calais Mint. The ryal has a lys over the sail of the ship [Pl. XIV. 4]; the half-ryal has the same mark in the waves under the ship [Pl. XIV. 6]; and the quarter-ryal has a lys between each word of the legend on one or both sides. One of these latter in my collection was procured at Boulogne, and was from a hoard of gold coins, chiefly of Charles the Bold, found

at Ambleteuse between Boulogne and Calais. The fact of there being no silver coins bearing the name of Calais need not be a difficulty, as we are now fairly certain that gold coins, and gold only, were struck at Calais in the reigns of both Richard II and Henry IV. The gold coins of Edward IV, to which I now refer, are very rare, particularly the ryal and half-ryal, showing, no doubt, that the attempt to revive the Calais Mint was of short duration. There are London groats with the crown mint-mark, having fleurs-de-lys between the words of the obverse legend, which I think may very probably be from obverse dies made for Calais, but never sent there.

THE ECCLESIASTICAL MINTS: THE CANTERBURY MINT.

Not many half-groats appear to have been issued from the archbishop's mint which can *with certainty* be ascribed to the time when the sun and crown were in use elsewhere, unless (as is probable) some with only the pall on one or both sides, but both quatrefoils at the sides of the king's neck, were struck during this period.⁷ These latter half-groats are fairly numerous, but there are a few, which have the pall as mint-mark on the obverse and the sun on the reverse, that are more uncommon. It is a curious feature of the archiepiscopal coins of this reign, and also of that of Henry VII, that while, as a rule, they only have the mint-mark of the archbishop, they *occasionally* and without any apparent reason have the current mint-mark of the ordinary regal coins as well. Pennies which are very rare are found with the

⁷ The only other period to which these coins could be ascribed is that when the rose was in use elsewhere.

pall mint-mark and Bouchier knot under the bust, which have quatrefoils at the sides, and which may probably be ascribed to the sun and crown period. I have not been able to trace any halfpenny that can with probability be ascribed to this period.

THE DURHAM MINT.

Bishop Booth struck pennies both with the sun and the crown mint-marks. They usually have a quatrefoil on one side and the letter B on the other side of the bust. The name of the place of mintage is spelt $\text{D}\text{E}\text{A}\text{R}\text{T}\text{O}\text{N}$. A later variety has a trefoil instead of a quatrefoil at the side of the bust, and on the reverse the letter D in the centre of the cross.

THE YORK MINT.

Archbishop Nevill struck pennies with the sun mint-mark and his usual symbols of the letter G and a key at the sides of the king's bust [Pl. XII. 7]. He did not apparently do this for long, as they are seldom met with, and he seems soon to have followed the example of the Royal mint in adopting the fleur-de-lys. I have not discovered a penny of his with the crown mint-mark.

THE CROSS FITCHÉE MINT-MARK.

This mint-mark succeeded the crown, but it did not displace the sun, which on the groats and half-groats continued to appear with it as the reverse mint-mark for some time. The cross fitchée is, I consider, one of the most important and interesting mint-marks of this reign, as I believe, after very careful study, that it was the last

one in use previous to the restoration of Henry VI. It is the last one to appear on a ryal or its parts, and the fact that at the restoration an indenture was actually made with Sir Richard Tonstall, providing for the coinage of nobles weighing 120 grains to be current for 10s. (the weight and value of Edward's ryals), proves, I think, that the ryals were being coined up to this time. There are (in silver) three varieties of the cross fitchée mint-mark. The first has the cross plain and rather pattée, and with a sharp pointed tail, which on the groats usually keeps within the inner circle of the legend, or nearly so [Pl. XV. 1]. These coins have trefoils at the sides of the bust. The second variety has the cross rather larger and pierced in the centre, while the tail is not so sharply pointed, but is longer and usually goes well beyond the inner circle of the legend [Pl. XV. 15]. These coins are without the trefoils at the sides of the bust. The third variety has not, I think, so far received the attention it deserves, even if in a general way it has been noticed at all. It has been usually classed as a cross pierced, and the coins with it have been very frequently confused with the *real* cross pierced, which is one of the latest mint-marks of this reign. The cross fitchée in question is exactly the same as the second variety, excepting that the tail is cut short, so that it never goes beyond the inner circle of the legend. It is also, on groats at least, found on both sides of the coin, and never with the sun, as in the case of the first and second varieties. I believe that these two latter varieties preceded the restoration of Henry VI, and that the second variety was in use up to that date at the London Mint. The third variety I believe to have been used during and *after* the restoration period. This

theory may be rather contrary to some previous classifications, but I believe it will be found correct, as it tends to clear away certain difficulties not otherwise easily disposed of, and I hope to develop it further in coming to the coinage of the restoration.

What I will call the pre-restoration varieties of the cross fitchée mint-mark are (with the exception of some York pennies of Bishop Nevill) only found on coins of the London Mint. Unlike the previous mint-marks, the cross fitchée seems to have reached none of the provincial mints during the pre-restoration period, but, as I have observed, silver coins of both Bristol and York with the sun and the lys mint-marks, and which have trefoils instead of quatrefoils at the sides of the bust, have all the other characteristics of the latest pre-restoration coins of the capital, and I think there can be no doubt but that they are contemporary with the earlier cross fitchée coins of London [Pl. XV. 2, 4]. By what appears an unaccountable freak, some Canterbury half-groats with the cinquefoil mint-mark (the last one of Edward IV) appear to have the early variety of cross fitchée on the obverse; but apart from this exception, it does not appear on any Canterbury coins.

It will be observed that it is on the cross fitchée silver coins of London, and those of the provincial mints which I have assumed to be contemporary with them, that the peculiar R's appear generally, which have been so specially associated with the coins of the restoration period, although their use was well established before that time. They are often spoken of as B's used in the place of R's, but of course they are distinctly the latter letter, although the inward curve of the tail on worn or badly struck coins has a curiously B-like appearance.

THE LONDON MINT.

Ryals and quarter-ryals are found with the cross fitchée mint-mark, but I believe that so far no half-ryals are recorded. In silver groats, half-groats, pennies, and halfpennies are found, with the first variety of this mint-mark having in the two first instances always the sun on the reverse. The groats are numerous, but the smaller denominations are all rare or very rare. Of the second variety, without the trefoils in field, there are groats in fair numbers, and pennies and halfpennies which are very rare. I have been unable to trace a half-groat.

THE YORK MINTS.

The fleur-de-lys continued in use at the Royal mint up to the time of the restoration, but trefoils instead of quatrefoils at the sides of the bust indicate those which are contemporary with the London cross fitchée coins. The character of the bust, together with the peculiar R's in the legends, also add certainty to this attribution.

There are some pennies of Archbishop Nevill with his usual marks in the field, and having the cross fitchée mint-mark of the first or unpierced variety. These are the only provincial coins with this mint-mark of pre-restoration type that I know of.

THE BRISTOL MINT.

As in the case of York, the silver coins struck at Bristol in the immediately pre-restoration period have not the cross fitchée as a mint-mark, but the sun, which had survived the crown, the mint-mark most generally

found on coins of the Bristol Mint. The latest pre-restoration groats, like those of York, are characterized by the trefoils in the field instead of quatrefoils, and by having the peculiar B-like R's in the legends. I have not seen a half-groat corresponding with these late groats, but there are examples of the penny and half-penny with trefoils in the field, but with the crown mint-mark. These are not, I imagine, so late as the groats, although it is difficult to be quite sure, owing to the less certain characteristics of the smaller coins. A few London and Canterbury coins with the crown mint-mark certainly have trefoils in the field.

THE ANGEL NOBLES.

At the same time that the groat was reduced from 60 grains to 48 grains, it was decided to issue a new gold coin having the same relative value to the 48-grain groat that the former nobles had to the 60-grain groat, and in order that it might not be confused with the new ryals and half-ryals, a fresh design was invented, having for the obverse the Archangel Michael overcoming the dragon, with the king's name and titles as legend; and for the reverse a ship somewhat like that on the former nobles, with a shield on the side bearing the royal arms of England, and surmounted by a large cross. Around, variously abbreviated, is the legend, PÆR CERVÆR TVTÆR SÆLVÆR NOS CÆRISTÆ RÆDÆMPTOR, which is taken from the Office for the Feast of the Finding of the Cross, in the Sarum Breviary.

The name of "noble angels" given to these new pieces served both as a continuance of the old name of the coin they represented and also as a distinction from the new

rose nobles or ryals. I have not spoken of these coins earlier because, although authorized in 1465, none appear to have been struck until a considerably later date, or not long before the restoration of Henry VI, and even then apparently in quite small numbers, as specimens of the early varieties are extremely rare. The earliest example appears to be that illustrated in Ruding (Pl. iii. 13) and Kenyon (Pl. v. 37). The obverse legend reads, ΕΔΩΤΑΡΔ' × ΔΙ × ΕΡΤ' × ΡΕΧ × ΠΝΕΛ' × Σ × ΦΡΑΝΘ × ΔΝΣ × Ι × Β × The reverse has the ship with three ropes from the stern and one from the prow. The cross above the shield of arms is surmounted by the sun's rays, and has a rose to the right and a sun to the left. The crown above the rays I take to be the mint-mark, although Kenyon describes it as part of the design. The legend reads, ΡΕΡ ✱ ΟΡΥΘΕΝ ✧ ΤΥΠΩ ✧ ΣΤΛΥΠ ✧ ΝΟΣ ΧΡΘ ΡΕΔΕΜΠΤΟΡ. This is the most complete reading of the motto found on any angel. It will be observed that the stops on the obverse are saltires, and on the reverse trefoils. This coin is in the British Museum, and it appears to be uncertain as to whether there is any other specimen so far known [Pl. XIV. 8]. The next example is rather later, and although it has no mint-mark, I associate it with the cross fitchée period from its having two trefoils in the field of the reverse which may correspond with the similar objects in the field of the silver coins with the cross fitchée mint-mark. This coin is also in the National Collection, and was formerly in the late Mr. Montagu's Cabinet (No. 592 in the Sale Catalogue). The obverse is similar to the last, save that it has trefoil instead of saltire stops, but the reverse is considerably varied. The sun's rays are without anything above (showing that the crown on the other coin is simply the mint-mark), and

the rose and sun at the sides of the cross are very large and their sides are transposed—the sun being to the right in this instance. The two trefoils are above the ropes of the ship. The legend reads, PÆR CRVQÆ TVΠ SΠLVΠ NOS XPQ RÆDÆMPTOR. The stops are small trefoils, and there is a small pierced rose at the end of the legend [Pl. XV. 11]. I believe these two coins to be examples of the only variety of angels struck before the restoration, for various reasons. They are larger in size than subsequent angels of Edward IV (although of the same weight), and resemble in this respect, as well as in other details, a rare angel of Henry VI, which I take to be his earliest, and of which there was an example (No. 526) in the Montagu Collection. The trefoils in the field of the reverse are also found on some angels of Henry VI, notably those of Bristol. Probably angels were about to be coined in place of ryals, when the troubles arose which led to the temporary flight of Edward IV, and it is possible that, as those of Edward had not as yet got into very general circulation, an opportunity appeared to present itself of issuing a coin that could be identified with Henry VI as the ryals were with Edward. Certainly, from whatever cause, the angels of Henry VI are common compared with the early examples of those of his rival, although his restoration was of such brief duration. The earliest angels of both kings give, I believe, the key-note to the sequence of mint-marks at this period, the correct arrangement of which has been so far rather uncertain.

Although half-angels were struck in fairly large numbers by Edward IV, I believe that all are of subsequent date to the restoration of Henry VI, and I therefore leave them for future consideration.

Before leaving the pre-restoration coinage of Edward

IV, it is desirable to notice a curious group of groats for which I find it difficult to satisfactorily account. They are of good silver, and some at least are of practically full weight, while all are sufficiently near it to preclude the supposition that they are contemporary forgeries. I refer to the coins with the curious legend ending $\text{FR}\pi\text{NCVS}$ or $\text{FR}\pi\text{NCV}$ on the obverse, and which are characterized generally by an appearance of being rather blundered or imperfect copies of some of the common groats of ordinary types. They usually purport to be from the London Mint, but in the British Museum there is one with the name of York upon it. The mint-marks on all specimens that I have seen are either the crown or cross fitchée, but in each case coarsely rendered. The stops are usually trefoils, and there are quatrefoils at the sides of the bust. The portrait is peculiar, and apparently the same punches were used for all. My suggestion in regard to these coins is that they were struck either in England, or more probably in Holland, for Edward and with his authority while he was in exile, in order to pay his levies and followers on his projected speedy return to recover the kingdom. This theory will, I think, account for their coarse and blundered workmanship, although they are obviously copied from the latest varieties of ordinary groats, &c., that would have been in circulation at the time of Edward's flight. It would also account for their having generally a tendency to be light in weight, although not to a very great extent. An illustration of one of these groats, weighing 46 grains, is given [Pl. XV. 14]. There are also a few half-groats of similar character. I have one weighing 19 grains, but it is much worn.

In a future paper I hope to continue the subject of the coinage of this period from the restoration of Henry VI.

COINS OF EDWARD IV.

First Issue.

HEAVY GOLD COINS.

Noble.

1. *Obv.*—EDWARD' DI' × GRAT REX ANGL & FRANC
 DNS hYB' King in ship, as in previous
 reigns, but there is no rudder. Four ropes
 from stern and two from prow; ornaments
 lys lion, lys lion, lys. A pellet on each side
 of the king's crown, and a fleur-de-lys below
 the shield. Unlike previous nobles, the
 king's name is above his head instead of
 reading from the right side.

Rev.—Mint-mark lys. IhC AVT' TRANSIENS PÆR
 MÆDIVM ILLORV' × IBTT Usual floriated
 cross, &c., as on nobles of Henry VI and
 previous reigns; & in the central panel, with
 pellet in front.

Wt. 107¼ grs.

Evans Collection.

2. *Obv.*—Same as last, but only the pellet on the left
 side of the king's crown shows, owing to the
 closeness of the sail of the ship.

Rev.—All as last, but the & in the centre is struck
 over an h upside down, and there is no
 pellet.

Wt. 107½ grs.

Evans Collection.

N.B.—The reverse of the last coin is apparently
 from the same die as that used for the latest
 noble of Henry VI, which is illustrated [Pl.
 IX. 1] for comparison. Both were found
 together.

No other gold coins belonging to the period of the
 heavy coinage are known so far.

EARLY HEAVY SILVER COINS.

(All with lys on neck, and pellets at sides of crown, and in two quarters of reverse.)

Groats (all of London).

1. *Obv.*—Mint-mark cross fleury. $\text{EDWARD DI' } \times \text{ } \text{GR} \pi' \times \text{ } \text{R} \text{EX } \pi \text{NL } \S \text{ } \text{FR} \pi \text{N} \diamond$ Pellet on each side of crown, lys on neck.

Rev.—Mint-mark small lys. $\text{POSVI D} \text{AV} \text{M } \pi \text{DIVTOR} \text{E' } \times \text{ } \text{M} \text{AV} \text{M } - \text{CIVIT} \pi \text{S LONDON}$
Extra pellet in first and third quarters.

2. All as last, but mint-mark obverse and reverse plain cross.

3. *Obv.*—Mint-mark plain cross; legend as before.

Rev.—No mint-mark, but small saltire before POSVI

4. *Obv.*—Mint-mark plain cross. $\text{EDWARD' D} \text{EI' } \text{GR} \pi \text{ } \text{R} \text{EX } \pi \text{NLI } \text{FR} \pi \text{N} \diamond$

Rev.—Mint-mark plain cross; usual legends and type.

5. All as last, but no mint-mark on reverse.

6. *Obv.*—Mint-mark plain cross; legend as No. 1.

Rev.—Mint-mark small lys; usual legends and type.

7. *Obv.*—Mint-mark plain cross, lys on point of tressure on breast instead of on neck.

Rev.—Mint-mark plain cross; usual legends and type.

8. *Obv.*—As last.

Rev.—No mint-mark; small saltire before POSVI

EARLY HEAVY HALF-GROATS.

1. *Obv.*—Mint-mark plain cross; lys on cusp of tressure on breast. $\text{EDWARD DI' } \times \text{ } \text{GR} \pi' \times \text{ } \text{R} \text{EX } \pi \text{NL' } \S \text{ } \text{FR} \pi'$

Rev.—No mint-mark. $\text{POSVI D} \text{AV} \text{M } \pi \text{DIVTOR} \text{E' } \text{M} \text{AV} \text{M}$ Extra pellet in first and third quarters.

Wt. 29 grs.

British Museum.

2. All as last, but mint-mark cross fleury on obverse only.

Wt. 28 grs.

F. A. W.

EARLY HEAVY PENNIES.

1. *Obv.*—Mint-mark plain cross. $\text{EDWARD} \times \text{R} \times \text{N} \diamond$
 $\text{N} \diamond \text{L} \searrow \text{FR} \nearrow$ Mascle after $\text{R} \times$, lys on neck, and pellets at sides of crown.

Rev.— QIVITTS LONDON Pellet in second and fourth quarters.

Wt. 12 grs.

Bernard Roth.

2. Exactly similar to last, but on the reverse the pellets are in the first and third quarters.

Wt. 14.6 grs.

W. M. Maish.

These are so far the only known specimens of the earliest heavy pennies.

HALFPENNY.

Obv.—Mint-mark plain cross. $\text{EDWARD R} \times \text{N} \diamond$
 Lys on neck, and pellets at sides of crown.

Rev.— QIVITTS LONDON Pellets in first and third quarters.

Wt. $7\frac{1}{2}$ grs.

British Museum.

Very rare, but several specimens are known.

FARTHING.

Obv.—Mint-mark plain cross. $\text{EDWARD R} \times \text{N} \diamond \text{LI}$
 Lys on neck, and pellets at each side of crown.

Rev.— QIVITTS LONDON

Wt. $3\frac{3}{4}$ grs. From the Christmas (lot 300), Shepherd (lot 182), and Montagu (lot 610) Collections—probably unique.

HEAVY COINS WITH THE ROSE MINT-MARK.

No gold coins known.

Silver.

Groats.

1. *Obv.*—Mint-mark plain cross ; lys on breast ; usual legend ; pellets at sides of crown.

Rev.—Mint-mark small pierced rosette or cinquefoil ; usual type and legends.

2. *Obv.*—Mint-mark cross fleury ; lys on breast ; usual legends ; pellets at sides of crown.

Rev.—Mint-mark small pierced rosette or cinquefoil, as last ; usual legends.

3. *Obv.*—Mint-mark large rose pierced ; usual legend ; quatrefoils at sides of neck ; crescent on breast ; small crescent, or possibly annulet, between and above the mint-mark and first letter of king's name ; no pellets at sides of crown.

Rev.—Mint-mark large rose pierced ; usual type and legends ; no extra pellets in two quarters, and no other marks.

4. *Obv.*—Mint-mark large rose pierced ; all as No. 3.

Rev.—Mint-mark pierced rose formed of central circle surrounded by five square-shaped leaves.
W. M. Maish.

5. *Obv.*—Mint-mark large rose not pierced ; quatrefoils at sides of neck ; small trefoil of pellets at point of cusp of tressure on the king's breast.

Rev.—Mint-mark large rose pierced ; usual type and legends.

6. *Obv.*—Mint-mark rose ; all as last.

Rev.—Mint-mark rose ; all as last, but eye (or mascle?) after CIVITAS

7. All as last, but cusp of tressure on breast fleured like the others.

8. All as before, but cusp of tressure on breast plain.

9. *Obv.*—Mint-mark rose ; cusp on breast fleured ; annulet at each side of neck.

Rev.—Mint-mark rose ; eye after TTS

10. As last, but cusp on breast plain.

Specimens are found with every possible combination as regards obverse and reverse of the three varieties of the rose mint-marks to which I have referred ; but in order not to prolong the list unnecessarily, I have not thought it necessary to describe them all, particularly as the variations appear to have no special significance.

The varieties of the rose are (1) a large five-leaved flower, sometimes pierced, and sometimes with a central button ; (2) a more conventional rose formed by a central circle, surrounded by five small squares forming the leaves ; (3) a small pierced rosette or cinquefoil, much resembling that on the early issues of Henry VI.

HEAVY HALF-GROATS WITH THE ROSE MINT-MARK.

1. *Obv.*—Mint-mark rose pierced ; quatrefoils at sides of neck. $\pi\Omega\delta\text{L} \searrow \text{FR}\pi\Omega\text{C}$ Cusp on breast not fleured.

Rev.—Mint-mark rose pierced ; no extra pellets.

Wt. 29 grs.

British Museum.

2. *Obv.*—Mint-mark rose pierced ; trefoil of pellets on breast ; quatrefoils at sides of neck. $\pi\Omega\delta\text{L} \searrow \text{FR}\pi\Omega\text{C}$

Rev.—Mint-mark rose *not* pierced ; eye after TTS

Wt. $27\frac{1}{2}$ grs.

Montagu Collection, No. 607.

3. *Obv.*—Mint-mark rose *not* pierced. $\pi\eta\delta\iota \ \S \ \text{FR}\pi\eta$
No quatrefoils or other marks in field. A
crescent on the breast is mentioned by
Hawkins, but it is very doubtful.

Rev.—No mint-mark or other special marks.

Wt. 26 grs. British Museum. From the
Shepherd and Montagu Collections.

[Pl. X. 4.]

4. *Obv.*—Mint-mark rose. $\pi\eta\delta\iota \ \S \ \text{FR}\pi$ Annulet each
side of neck; no stops.

Rev.—Mint-mark rose; two pellets after $\tau\pi\delta$

Wt. $29\frac{1}{2}$ grs. F. A. W. From the Webb
Collection (174). [Pl. X. 5.]

CANTERBURY HEAVY HALF-GROAT.

Obv.—Mint-mark pall; quatrefoils at sides of neck;
Bourchier knot under bust.

Rev.—No mint-mark; usual legend. CIVITAS
 CANTOR

Wt. 26 grs. [Pl. X. 11.]

I have two similar coins of this weight, and both are
clipped and worn to some extent.

HEAVY PENNIES WITH THE ROSE MINT-MARK.

LONDON.

1. *Obv.*—Mint-mark rose (rather small); bust of similar
character to the earlier variety; quatrefoils on
each side of neck. $\text{EDWARD} \times \text{DI} \times \text{GER} \times$
 $\text{R} \times \pi\eta\delta\iota$

Rev.— CIVITAS LONDON No mint-mark or other
marks.

Wt. 13 grs. full. [Pl. X. 6.]

H. B. Earle Fox.

2. *Obv.*—Mint-mark large rose. ΕΔΩΑΡΔ ΔΙ ΕΡΑ
ΡΕΧ ΠΟΓ(?)ΛΙΘ). Quatrefoils at sides
of neck; bust as last.

Rev.—ΟΙΥΙΤΑΣ ΛΟΝΔΟΝ No special marks.

Wt. 13 grs., although a piece is chipped out
taking two letters. [Pl. X. 8.] F. A. W.

YORK.

Obv.—Mint-mark(?). ΕΔΩΑΡΔ ΔΙ ΕΡΑ ΡΕΧ Π
Large bust; quatrefoils at sides of neck.

Rev.—ΟΙΥΙΤΑΣ ΕΒΟΡΑΚΙ No quatrefoil in centre
of cross.

Wt. $13\frac{1}{2}$ grs., although worn. [Pl. X. 7.]
F. A. W.

The three pennies described here, in addition to their weight, are of distinctly larger size and different character to the light pennies, and there can be no doubt as to their being of the later heavy coinage. So far they are the only three specimens known.

DURHAM HEAVY (?) PENNIES.

1. *Obv.*—Mint-mark cross with large rose to left.
ΕΔΩΑΡΔ × ΡΕΧ × ΠΟΓΛΙΘ Rude bust
with indications of drapery.

Rev.—ΟΙΥΙΤΑΣ ΔΟΡΟΛΙ Rose in centre of cross.

Wt. 12 grs.

2. *Obv.*—Mint-mark plain cross only. All as last.

Rev.—As last, but large rose after ΔΟΡΟΛΙ

Wt. 12 grs.

These pennies, although light in weight for "heavy" coins, are very full for light ones, and for reasons given I think they may be considered "heavy." Hawkins' No. 352 is an illustration of the type, but it may be a light one, as similar coins are more frequently found of 9 or 10 grains.

HEAVY HALFPENNIES WITH THE ROSE MINT-MARK.

1. *Obv.*—Mint-mark rose. EDWARD DI GRÆ REX
No quatrefoils or other emblems in the field.

Rev.—CIVITAS LONDON

Wt. $7\frac{1}{2}$ grs.

British Museum.

2. *Obv.*—Mint-mark pierced rose. EDWARD DI GRÆ
RÆX ꝛ Quatrefoils at sides of neck.

Rev.—CIVITAS LONDON

Wt. 8 grs. [Pl. X. 10.] British Museum.

3. *Obv.*—Mint-mark rose; legends as No. 1, but saltire
cross at each side of neck.

Wt. $8\frac{1}{2}$ grs.

British Museum.

4. *Obv.*—Mint-mark rose. EDWARD RÆX ANGLIÆ
Annulet at each side of neck.

Rev.—As before.

Wt. 7 grs.

A. H. Baldwin.

5. As last, but reads ANGLI

Wt. 7 grs. [Pl. X. 9.] British Museum.

No farthings so far discovered.

LIGHT COINS WITH THE ROSE MINT-MARK ONLY.

LONDON.

Ryal.

Obv.—EDWARD' A DI Ꝛ GRÆ A RÆX A ANGL' A
S FRÆNC A DNS' I A B King in ship with
sword and shield; three ropes from stern and
one from prow; flag with the letter E at
stern; large rose on side of ship; ship orna-
ments, lys, lion, lion, lys.

Rev.—Mint-mark rose. INQ AVT v TRANSIENS
PER MEDIUM A ILLOREM A I A BAT
Floriated cross with rose upon a large sun in
the centre, lion and crown in each angle.

[Pl. XI. 1.]

Quarter-ryal.

Obv.—Mint-mark rose. ΕΔWΛRD (over ηΕΝΡΙC)
 † DI 6RΛ REX ΛN6 Lys after name;
 a tressure of eight arcs all fleured in centre;
 shield with the arms of France and England,
 quarterly, with a rose above.

Rev.—Mint-mark rose. ΕΧΛΤΤΒΙΤΥR ΙΝ 6LORIΛ
 Tressure of eight arcs enclosing floriated cross,
 with rose upon sun in the centre.

Wt. 23½ grs.

F. A. W.

N.B.—This coin, from its weight and from the obverse being from an altered die of Henry VI, may be a quarter-noble of the coinage ordered in August, 1464, previous to the issue of ryals.

Groats.

1. *Obv.*—Mint-mark rose. ΕΔWΛRD DI 6RΛ REX
 ΛN6L † FRΛNΛ No stops; arc of tressure
 on breast not fleured; annulet at each side
 of bust.

Rev.—No mint-mark; usual legend; eye after DON

2. *Obv.*—All as last, but cusp of tressure on breast fleured.

Rev.—Mint-mark rose; eye after TΛS

3. *Obv.*—Mint-mark rose. ΕΔWΛRD' × DI × 6RΛ' ×
 REX × ΛN6L' † FRΛNΛ × Large quatre-
 foil at end of legend; no marks in field.

Rev.—Mint-mark rose; usual legends; eye after TΛS

4. *Obv.*—Mint-mark rose pierced; large bust; legend as last; small trefoil of pellets on breast; quatrefoils at sides of bust.

Rev.—Mint-mark rose; usual legends; eye after TΛS

Wt. 48 grs. [Pl. X. 12.]

N.B.—This is a light groat struck from heavy dies, and is not very uncommon.

5. *Obv.*—Mint-mark large rose; legend as before; cusp on breast fleured; quatrefoils at sides of bust; transitional type of portrait.

Rev.—Mint-mark small pierced rosette or cinquefoil; usual legends; no eye-mark after mint-name.
[Pl. XI. 2.]

N.B.—*All the foregoing are of early character, and probably struck in 1464.*

6. *Obv.*—Mint-mark rose of medium size; usual legend; rose on cusp of tressure on breast; quatrefoils at sides of head. *A smaller head and bust is here introduced, which evidently marks the commencement of the general re-coinage in 1465.*

Rev.—Mint-mark rose; usual legend; a small pellet introduced between the three larger ones in the third quarter. *This is another characteristic of the later and more common groats with the rose mint-mark.*
[Pl. XI. 3.]

7. *Obv.*—All as last, but nothing on cusp of tressure on breast.

Rev.—Mint-mark pierced rose; extra pellet in first quarter. [Pl. XI. 4.]

8. *Obv.*—All as last, but cusp on breast fleured.

Rev.—All as last.

9. *Obv.*—Mint-mark rose; all as last, but reads FRÆRDIÆ

Rev.—No variation from last.

10. *Obv.*—Mint-mark rose. ΕΔWÆRD × DI × ΕΡΑCΙΛ × REX × ΠR6L × Σ × FRÆRDI Cusp on breast; fleured quatrefoils at sides of bust.

Rev.—Mint-mark rose; usual legends; extra pellet in fourth quarter.
H. W. Monckton.

LIGHT HALF-GROATS OF LONDON WITH MINT-MARK ROSE.

1. *Obv.*—Mint-mark rose. EDWARD' DI ERN REX
 ANGL & FRFRQ Annulet each side of
 bust; cusp on breast not fleured.

Rev.—Mint-mark rose. POSVI DEVS R ADIVTOR
 REX CIVITAS LONDON No special
 marks. [Pl. X. 15.]

Wt. 23 grs., so far unpublished. F. A. W.

2. *Obv.*—Mint-mark rose; legend as last; quatrefoils at
 sides of bust.

Rev.—No mint-mark; legends as last; extra pellet
 in first quarter.

3. *Obv.*—Mint-mark rose. EDWARD DI ERN' REX
 ANGL x s x F x Cusp on breast fleured; qua-
 trefoils at sides of bust.

Rev.—No mint-mark; usual type and legends.

Neck and Webb Collection. (*Num. Chron.*,
 N.S., Vol. X., Pl. VIII. 4.)

LONDON PENNIES WITH THE ROSE MINT-MARK.

1. *Obv.*—Mint-mark rose; annulet each side of neck.

Webb Collection (lot 188). No weight
 given. Possibly a heavy penny.

2. *Obv.*—Mint-mark rose. EDWARD DI ERN REX
 ANGL Annulet each side of neck.

Wt. $11\frac{2}{3}$ grs. Late Wakeford (Hawkins,
 No. 3); described as clipped. Probably a
 heavy penny.

3. *Obv.*—Mint-mark rose. EDWARD DI ERN R . . .
 Quatrefoils at sides of neck.

Rev.—CIVITAS LONDON Eye before LOR

W. T. Ready.

LONDON HALFPENNIES.

Obv.—Mint-mark rose. EDWARD DI GRA REX
Crosses or quatrefoils at sides of neck.

Rev.—CIVITAS LONDON Usual type.

There appear to be no varieties of light halfpennies with the rose mint-mark, and they are all apparently struck from the same dies as the heavy ones, from which it is difficult to distinguish them, as the weight is usually rather full.

FARTHING.

None appear to be so far known.

COINS WITH THE ROSE MINT-MARK OF THE PROVINCIAL
MINTS.

CANTERBURY ROYAL MINT.

Half-groat.

Obv.—Mint-mark rose. EDWARD DI GRA REX
ARGL & FRA Trefoils at sides of bust;
small trefoils as fleurs to cusps of tressure.

Rev.—Mint-mark rose. CIVITAS CANTOR
[Pl. XII. 2.]

This coin, from its character and having the trefoils, is probably of later date than the period of the general use of the rose mint-mark before the introduction of others.

CANTERBURY ARCHIEPISCOPAL MINT.

Half-groats.

1. *Obv.*—Mint-mark pall; quatrefoils at sides of bust;
Bourchier knot below legend ends FR

Rev.—No mint-mark. CIVITAS CANTOR

2. Same as last, but mint-mark pall on both sides. On reverse stalk in first quarter from inner circle into group of pellets.

3. *Obv.*—Mint-mark pall reads FR Λ Knot under bust ; four wedge-shaped objects in the field ; no quatrefoils.

Rev.—Mint-mark rose. CIVITVS CANTOR

4. As last, but mint-mark pall obverse and reverse.

[Pl. XIV. 7.]

Penny.

1. *Obv.*—Mint-mark pall ; knot under bust ; quatrefoils at sides of neck. $\text{EDWARD DI GR Λ REX}$
 RN

Rev.— CIVITVS CANTOR Stalk in second quarter.

2. All as last, but no quatrefoils at sides of bust ; stalk in first quarter of reverse. [Pl. XI. 7.]

These coins may very probably, in part at least, belong to the period of the sun mint-mark.

COVENTRY.

I have seen, as I mentioned previously, a Coventry groat with the rose on both sides, apparently from locally made dies, but of good silver and weight. I am, however, unable to describe it, owing to inability to trace its present owner.

DURHAM PENNIES.

Obv.—Mint-mark cross. EDWARD REX ANGLIB

Rev.— CIVITVS DONOLI Rose in centre of cross.

These pennies, which are fairly numerous, are of barbarous work, and are evidently from locally made dies. Those that I have weigh from 9 to 10 grains.

They exactly resemble, save in weight, those described under the heavy coinage.

In the *Numismatic Chronicle*, Third Series, Vol. XVI., Mr. L. A. Lawrence describes a number of other Durham light pennies with the rose mint-mark, but these I attribute to a much later period than 1465, for reasons that I hope to give on a future occasion.

NORWICH.

Ryal.

Mint-mark rose on reverse only; usual type and legends; R in waves under ship.

British Museum.

Half-ryal.

Obv.—Usual type and legends; mint-mark rose on reverse only; R in waves under ship.

[Pl. XI. 8.] British Museum.

Both these coins are of rather rough work, and suggest locally made dies.

There were specimens of the half-ryal in the Montagu and the Manley Foster (1905) sales, both, as shown by the plates, presenting the rough characteristics of the Museum specimen, and apparently from the same dies.

Groat.

Obv.—Mint-mark rose. EDWARD DI GRA REX ANGL & FRANC - R on breast; no quatre-foils at sides of bust.

Rev.—Mint-mark rose; usual outer legend. CIVITAS NORWICH in inner circle. [Pl. XI. 10.]

F. A. W.

This coin is apparently from locally made dies, and is of rather rough work, but the legends are quite usual and correct, and the letters well formed. It is of fine

silver, but, owing probably to considerable clipping, it only now weighs $35\frac{1}{2}$ grains.

YORK: PENNIES OF THE ROYAL MINT.

1. *Obv.*—Mint-mark rose. EDWARD DI GRÆ REX
 ΠΝΕΛ Rose on breast; no emblems in field.

Rev.—QIVITVS EBORACI Quatrefoil in centre of cross.

Wt. $10\frac{1}{2}$ grs. [Pl. XI. 6.]

2. *Obv.*—Mint-mark rose; no rose on breast, and no emblems in the field; legend as last.

Rev.—As last, with quatrefoil in centre of cross.

Wt. 10 grs. [Pl. XI. 5.]

THE ARCHIEPISCOPAL MINT.

1. *Obv.*—Mint-mark rose. EDWARD DI GRÆ REX
 ΠΝΕΛ B (for Archbishop Booth) to l., key to r., of bust.

Rev.—QIVITVS EBORACI No quatrefoil in centre of cross.

Wt. 11 grs.

2. *Obv.*—Mint-mark rose; legend as before; B and key at sides of bust.

Rev.—As last, but usual quatrefoil in centre.

Wt. 10 grs.

3. *Obv.*—Mint-mark rose. EDWARD DI GRÆ REX
 ΠΝΕΛ G (for Archbishop George Nevill) to l. and key to r. of bust.

Rev.—QIVITVS EBORACI Quatrefoil in centre.

Wt. 12 grs. Other specimens weigh $11\frac{1}{2}$ grs. and less.

4. *Obv.*—Mint-mark rose (?). All as last, but no quatrefoil in centre of reverse.

Wt. 10 grs. (*Num. Chron.*, Third Series, Vol. XVI. p. 82.)

5. *Obv.*—Mint-mark rose. EDWARD REX ANGLI 6
and key at sides of bust.

Rev.—QIVITVS EBORACI

Eight specimens weighing from 9.25 grs. to 12.5 grs. (*Num. Chron.*, Third Series, Vol. XVI. p. 81.)

6. Mint-mark cross; otherwise as last.

Wt. 10 grs.

N.B.—Mr. L. A. Lawrence, who describes these last two coins, suggests from their obverse legends, and for other reasons, that they are "heavy" pence. This, however, appears to be impossible, as ample documentary evidence exists to prove that the light coinage was commenced in 1464, whereas Archbishop George Nevill was not appointed till 1465. My own suggestion is that they are from locally made dies, prepared hastily, immediately after Archbishop Nevill received his appointment, and before he was able to obtain officially made dies from London. The coins, so far as I have seen them, and one which I myself have, are of very rough work, and are badly struck.

COINS WITH THE SUN ALONE, AND SUN WITH CROWN MINT-MARKS, INCLUDING THOSE WHICH HAVE THE ROSE IN CONJUNCTION WITH THE OTHERS.

LONDON.

Ryals with the sun above.

1. *Obv.*—No mint-mark. EDWARD DI GRA REX
ANGLI & FRATRI DNI IN Trefoil stops
between words, and between I and B of last
word; usual type, with no special peculiarities.

Rev.—Mint-mark sun. IHT AVT TRANSIENS PER
MEDIUM IBAT Trefoil stops, and between
I and B in IBAT Usual design as described
under the rose mint-mark.

2. *Obv.*—Mint-mark sun above sail of ship; legend and type as last.

Rev.—Mint-mark sun; legend, &c., as before; two trefoils between all words but the first two.
[Pl. XII. 5.]

3. *Obv.* and *Rev.*—Mint-mark sun; reads ηIB and $\eta\text{IB}\pi\text{T}$.

There are other slight and unimportant varieties of spelling, but all due to accident and irregular spacing out of letters.

Half-ryal.

Obv.—Mint-mark sun, with two trefoils and a quatrefoil after $\text{EDWARD DI GR}\pi\text{ R}\pi\text{X}\pi\text{NL}$
 ζ $\text{FR}\pi\text{RCI}$ Trefoil stops between words, and two between F and R in $\text{FR}\pi\text{RCI}$; usual type.

Rev.—Mint-mark crown. $\text{DOMIN}\pi\text{ R}\pi\text{ IN FVROR}\pi$
 $\text{TVO}\pi\text{R}\pi\text{V}\pi\text{S}\pi\text{R}\pi$ Trefoil stops; usual type.

Quarter-ryals.

1. *Obv.*—Mint-mark sun; shield with the arms of France and England quarterly, with rose above; the whole within a treasure of eight arcs.
 $\text{EDWARD} \times \text{DI} \times \text{GR}\pi \times \text{R}\pi\text{X} \times \pi\text{NL} \zeta \text{F}$

Rev.—Mint-mark rose. $\text{EX}\pi\text{LT}\pi\text{BITVR} \pi \text{IN} \frac{\pi}{2}$
 $\text{GLORI}\pi$ Rose upon a sun over the central part of the usual floriated cross of the former quarter-nobles.

2. *Obv.*—Mint-mark rose. $\text{EDWARD} \times \text{DI} \times \text{GR}\pi \times$
 $\text{R}\pi\text{X}\pi\text{NL} \zeta \text{F} \pi$ Shield of arms enclosed by a quatrefoil within a circle having trefoils in the four spandrels; rose to l. and sun to r. of shield; π between two pellets above, and fleur-de-lys below; legend begins at bottom and reads to l.

Rev.—Mint-mark sun. $\text{EX}\pi\text{LT}\pi\text{BITVR IN GLORI}\pi$
Rose between each word and at end of legend; design as last. [Pl. XII. 4.] F. A. W.

3. *Obv.*—Mint-mark rose; usual legend and type; lys after EDWARD

Rev.—Mint-mark sun. EXALTABITVR IN GLORIA
UR Trefoil stop.

4. *Obv.*—Mint-mark crown; trefoil stops.

Rev.—Mint-mark crown and rose. British Museum.

Silver.

Groats.

1. *Obv.*—Mint-mark rose. EDWARD DI GRA REX
ANGL & FRANCA Cusp on breast fleured
quatrefoils at sides of neck; saltire stops.

Rev.—Mint-mark sun; usual legend and type.

2. *Obv.*—Mint-mark sun; usual legend and type, all as
last; saltire stops.

Rev.—Mint-mark rose; usual type.

3. *Obv.* and *Rev.*—Mint-mark sun; usual legends and
types both sides.

4. *Obv.* and *Rev.*—Mint-mark sun; usual legends, &c.;
lys after CIVITAS; saltire stops.

5. *Obv.*—Mint-mark sun. EDWARD Otherwise usual
legend and type, but no quatrefoils in the
field; saltire stops.

Rev.—Mint-mark crown; usual type and legends.
[Pl. XIV. 1.]

6. *Obv.*—Mint-mark crown with sun to the left; quatre-
foils in field, and one beneath bust; usual
legend; saltire stops.

Rev.—Mint-mark sun; usual legends and type.
[Pl. XIII. 9.] F. A. W.

7. *Obv.*—Mint-mark crown; quatrefoils in field and
beneath bust.

Rev.—Mint-mark sun; usual legends and type.

8. *Obv.*—Mint-mark crown, with rose to the l.; usual legend; quatrefoils in field and below bust; small trefoils as fleurs to cusps of tressure.

Rev.—Mint-mark sun; usual type and legends.
Col. H. W. Morrieson.

9. *Obv.*—Mint-mark crown with sun to l., otherwise as last.

Rev.—Mint-mark crown. Col. H. W. Morrieson.

10. *Obv.*—Mint-mark crown; quatrefoils at sides of neck and under bust; small trefoils as fleurs to tressure.

Rev.—Mint-mark rose; usual legends, but LONDON in error for LONDON [Pl. XIV. 9.]
F. A. W.

Half-groats.

1. *Obv.*—Mint-mark crown. ΕΔΩΤΑΡΔ ΔΙ ΘΡΑ ΡΕΧ
ΑΝΓΛ < FR Trefoil stops, and trefoil each side of neck; trefoils as fleurs to cusps of tressure, that on breast not fleured.

Rev.—Mint-mark sun. ΠΟΣΙ ΔΕΥΜ ΑΔΙΒΤΟΡΕ
ΜΕΥΜ ΔΙΒΙΤΑΣ ΛΟΝΔΟΝ Usual type.
[Pl. XIII. 8.] F. A. W.

2. *Obv. and Rev.*—All as last, but quatrefoils instead of trefoils at sides of bust on obverse.

Lawrence Sale Catalogue, No. 403.

Penny.

Obv.—Mint-mark sun. ΕΔΩΤΑΡΔ ΔΙ ΘΡΑ ΡΕΧ
ΑΝΓΛ Quatrefoils each side of bust.

Rev.—ΔΙΒΙΤΑΣ ΛΟΝΔΟΝ Usual cross and pellets.
[Pl. XII. 6.] British Museum.

Half-pennies.

Obv.—Mint-mark sun. ΕΔΩΤΑΡΔ ΔΙ ΘΡΑ ΡΕΧ
Trefoil each side of bust.

Rev.—ΔΙΒΙΤΑΣ ΛΟΝΔΟΝ Usual cross and pellets.

COINS OF THE PROVINCIAL MINTS WITH THE SUN ONLY, OR
IN COMBINATION WITH THE ROSE OR THE CROWN.

BRISTOL.

Ryals.

1. *Obv.*—As of London, but with B in the waves under the ship; trefoils as stops.

Rev.—Mint-mark sun; legend and type same as London; trefoils between all words and between I and BVT in IBVT

2. *Obv.*—As last.

Rev.—Mint-mark sun; rose after ILLORVM
[Pl. XII. 8.] British Museum.

Half-ryals.

1. *Obv.*—EDWARD' A DI GR' REX v' ANGL' AS A
FRAN' B in waves under ship.

Rev.—Mint-mark sun with rose to the l.; usual legend; trefoil stops.

2. *Obv.*—As last.

Rev.—Mint-mark sun only; otherwise as last.
Rashleigh.

Silver.

Groats.

1. *Obv.*—Mint-mark sun; quatrefoils at sides of neck; B on breast; saltire stops; usual legend.

Rev.—Mint-mark rose. VILL' BRISTOW Usual
outer legend. [Pl. XII. 1.]

2. *Obv.*—Mint-mark sun; all as last.

Rev.—Mint-mark sun. VILL' BRISTOLL
[Pl. XII. 9.]

3. *Obv.*—Mint-mark crown; usual type and legend.

Rev.—Mint-mark sun. H. A. Parsons.

4. *Obv.* and *Rev.*—Mint-mark sun, reads FR π NOI Trefoils at sides of neck instead of quatrefoils; small trefoils as fleurs to cusps of tressure; R's with tails curled inwards. VILL π BRISTOW

Half-groats.

1. *Obv.*—Mint-mark rose. EDW π RD DI GR π REX π NO π L \angle F Quatrefoils at sides of bust.

Rev.—Mint-mark sun. VILL π BR π STOW
W. M. Maish.

2. *Obv.*—Mint-mark sun; reads FR π N Quatrefoils at sides of bust.

Rev.—No mint-mark. VILL π BR π STOLL

CANTERBURY ROYAL MINT.

Half-groats.

Obv.—Mint-mark crown; usual type and legend; no knot under bust; quatrefoil each side of neck.

Rev.—Mint-mark sun. CIVIT π S CANTOR
W. T. Ready.

COVENTRY MINT.

Ryals.

1. *Obv.*—EDW π RD DI GR π REX π NO π L \angle FR π NO DNS IB Trefoil stops; large quatrefoil and group of three trefoil stops after FR π NO \angle in waves under ship; usual obverse design.

Rev.—Mint-mark sun. I η C π VT TR π NSIENS P π R π EDIV π ILLORV π I B π T Double trefoil stops between all words and between I and B π T Usual reverse design.

[Pl. XII. 10.]

2. *Obv.*—All as last.

Rev.—As last, but large rose after ILLORV π
British Museum.

Half-ryal.

Obv.—Usual legend and type; trefoil stops; α in waves under ship.

Rev.—Mint-mark sun with rose to l., separated by two trefoils. British Museum.

Groats.

1. *Obv.*—Mint-mark sun; usual legend and type; α on breast; quatrefoils at sides of neck.

Rev.—Mint-mark rose. α IVIT α S α OV α TR α

2. *Obv.*—Mint-mark sun; all as last, but reads FR α N

Rev.—Mint-mark sun; quatrefoil after α OV α TR α

3. *Obv.*—All as No. 1, but reads FR α N α

Rev.—As last, but mark of contraction over V α in α OV α TR α , and no quatrefoil after.

Half-groat.

Obv.—Mint-mark sun. α DW α RD DI 6R α R α X
 α N6L \angle FR α Saltire stops; quatrefoils at sides of neck; no α on breast.

Rev.—Mint-mark sun; usual outer legend; α IVIT α S
 α OV α TR α in inner circle. [Pl. XIII. 2.]
 British Museum.

NORWICH.

Ryal.

Obv.—Usual legend and design, with α in the waves under the ship; trefoil stops.

Rev.—Mint-mark sun; usual legend; trefoil stops.
 British Museum.

Half-ryal.

None appear to be known with the sun mint-mark.

Groats.

1. *Obv.*—Mint-mark sun; α on breast; quatrefoils at sides of neck; usual legend.

Rev.—Mint-mark rose. α IVIT α S NORWIC Small
 trefoil after α IVIT α S British Museum.

2. *Obv. and Rev.*—Mint-mark sun.

3. As last, but reads RORVIO

Half-groats.

1. *Obv.*—Mint-mark sun. EDWARD DI GRA REX
 RDEL S FR Quatrefoils at sides of neck;
 no R on breast.

Rev.—DIVITIS RORVIO [Pl. XIII. 4.]
 F. A. W.

2. *Obv. and Rev.*—As last, but R on breast.
 Ruding, *Sup.*, iii. 15; Snelling, ii. 38.

YORK ROYAL MINT.

Ryals.

1. *Obv.*—Usual type and legend, with E in waves under ship.

Rev.—Sun and lys, with two trefoils between.

3. All as last, but on reverse mint-mark lys only.

Half-ryals.

1. *Obv.*—Usual type, with E in waves under ship.

Rev.—Mint-mark lys, with rose to the l.
 British Museum.

2. As last, but on reverse mint-mark sun.

3. Similar in all respects, but on reverse mint-mark lys.

Quarter-ryals.

1. *Obv.*—Mint-mark lys. EDWARD DI GRA REX
 RDEL S FR Trefoil stops; rose to l., sun
 to r., of shield.

Rev.—Mint-mark lys; quatrefoil after GLORIA

2. *Obv.*—Mint-mark lys. RDEL S Otherwise as last.

Rev.—Mint-mark crown. EXALTABITVTVR (sic)
 IN GLOR

Groats.

1. *Obv.*—Mint-mark sun; usual legend and type;
 quatrefoils at sides of neck; E on breast.

Rev.—Mint-mark sun. DIVITIS EBORACI

2. *Obv.*—Mint-mark lys; all as last.

Rev.—Mint-mark sun; usual type and legends.

3. *Obv.*—Mint-mark lys; usual type and legends.

Rev.—Mint-mark crown; legends and type as before.

4. *Obv.* and *Rev.*—Mint-mark lys; otherwise as before.

5. All as last, but no \mathfrak{E} on breast.

6. *Obv.*—Mint-mark lys; trefoils instead of quatrefoils at sides of neck; small trefoils as fleurs to cusps.

Rev.—Mint-mark sun; legends and type as before; R's with incurved tails in legends on both sides.

7. As last in all particulars, but mint-mark lys on *both* sides.

Half-groats.

1. *Obv.*—Mint-mark sun. EDWARD DI GR \mathfrak{A} REX
 \mathfrak{A} NGEL \mathfrak{S} FR \mathfrak{A} Quatrefoils at sides of neck;
 cusp on breast fleured.

Rev.—Mint-mark sun. CIVITAS EBORACI
 [Pl. XIII. 6.] British Museum.

2. *Obv.*—Mint-mark lys. \mathfrak{A} NGEL \mathfrak{S} FR \mathfrak{A} Quatrefoils
 at sides of neck; \mathfrak{E} on breast.

Rev.—Mint-mark lys *after* POSVI F. A. W.

3. *Obv.*—As last, but no \mathfrak{E} on breast; cusps of treasure
all fleured.

Rev.—Mint-mark lys *before* POSVI F. A. W.

4. *Obv.*—Mint-mark lys; cusps over crown not fleured;
 otherwise as last.

Rev.—Mint-mark lys *after* POSVI Trefoil after
 DEVM

5. *Obv.*—Mint-mark lys reads FR \mathfrak{A} Cusp of treasure
 on breast not fleured, those above crown
 fleured; trefoils instead of quatrefoils at
 sides of neck.

Penny.

Obv.—Mint-mark lys. ΕΔWΤRD DI GRΤ REX
ΤΝ6L Trefoils at sides of bust.

Rev.—ΕΙVITΤS ΕΒΟRΤCΙ Quatrefoil in centre of
cross. [Pl. XV. 6.] F. A. W.

Halfpennies.

1. *Obv.*—Mint-mark lys. ΕΔWΤRD DI GRΤ REX
Trefoil at end of legend and on each side of
bust.

Rev.—ΕΙVITΤS ΕΒΟRΤCΙ Usual cross and pellets.
[Pl. XV. 10.] F. A. W.

2. *Obv.* and *Rev.*—Obverse and reverse as last, but reads
REX Τ Montagu Catalogue.

CALAIS (?).

Ryal.

Obv.—Usual type and legend of other ryals, but lys
over the sail of the ship; trefoil stops.

Rev.—Mint-mark sun; usual type and legend.
[Pl. XIV. 4.]

Half-ryal.

Obv.—Usual type and legend of half-ryals, but with
lys in the waves under the ship.

Rev.—Mint-mark crown; usual type and legend.
[Pl. XIV. 6.]

Quarter-ryals.

1. *Obv.*—Mint-mark sun. ΕΔWΤRD DI GRΤ REX
ΤΝ6L' Sun to l., rose to r., of shield;
trefoil stops.

Rev.—Mint-mark crown. ΕΧΤLTΤBITVR Ψ IN Ψ
GLORIΤ Lys between each word.

2. *Obv.*—Mint-mark crown. ΤΝ6L ⚡ Saltire stops;
rose to l., sun to r., of shield.

Rev.—Mint-mark crown; lys between each word and
at end of legend.

3. *Obv.*—Mint-mark crown. EDWARD DI GRA REX
KINGL Lys after each word.

Rev.—Mint-mark crown. EXALTABITVR IR
GLORIA Lys after IR; rose after first and
last words. Montagu Catalogue, lot 589.

Certain rare London groats with the crown mint-mark have lys stops on the obverse. I have suggested that these obverse dies were probably made for Calais, but never sent.

THE ECCLESIASTICAL MINTS: CANTERBURY.

Half-groats.

Obv.—Mint-mark pall and cross. EDWARD DI GRA
REX KINGL S FRANC Quatrefoils at
sides of neck; Bourchier knot under bust.

Rev.—Mint-mark sun. CIVITAS CANTOR. Stalk
between pellets in second quarter.

Pennies.

Those previously ascribed to the rose mint-mark period may be of rather later date.

DURHAM.

Penny.

Obv.—Mint-mark sun. EDWARD DI GRA REX
KING B to the r. and quatrefoil to the l. of
bust.

Rev.—CIVITAS . . . HAM F. A. W.

YORK.

Penny.

Obv.—Mint-mark sun. EDWARD DI GRA REX
KING 6 to l. and key to r. of bust.

Rev.—CIVITAS EBORACI Quatrefoil in centre of
cross. [Pl. XII 7.]

COINS WITH THE CROWN MINT-MARK ALONE.

LONDON.

Ryal.

Obv. and Rev.—Similar to other ryals. Mint-mark crown on reverse only; trefoil stops on both sides.

Half-ryal.

Obv. and Rev.—As other half-ryals; reverse mint-mark crown; trefoil stops both sides.

Quarter-ryals.

1. *Obv.*—Mint-mark crown. EDWARD DI GRA REX
RUEL Rose to l. and sun to r. of shield;
usual trefoils in spandrils of tressure omitted.

Rev.—Mint-mark crown. EXALTABITVR (sic)
IN GLOR No stops either side.

2. *Obv. and Rev.*—As last, but trefoils in spandrils of tressure.

Angel.

Obv.—EDWARD' x DI x GRA x REX x RUEL x
FRANC' x DNS x I x B x St. Michael
slaying the dragon.

Rev.—Mint-mark crown. PER GRVCISM TVTSM
SALVA ROS XPI RDEMPTOR Trefoil
stops; ship with shield of arms beneath a
cross; three ropes from stern, one from prow;
sun's rays above; sun to l., rose to r., of
cross. [PL. XIV. 8.] British Museum.

Silver.

Groats.

1. *Obv.*—Mint-mark crown; quatrefoil below bust and
at each side of neck.

Rev.—Mint-mark crown. CIVITAS LONDON

2. *Obv. and Rev.*—Mint-mark crown; cusp of tressure on
breast fleured. [PL. XIII. 12.]

3. As last, but no fleur or quatrefoil to cusp of tressure
below bust.

4. *Obv.*—Mint-mark crown; fleur-de-lys stops after GRX, REX, and ANGL; cusp on breast fleured.

Rev.—QVIVITVS LONDON

The obverse die of this coin was probably one intended for Calais, but not sent.

Half-groats.

1. *Obv.*—Mint-mark crown; quatrefoils at sides of neck; all cusps of tressure, except that on breast, fleured. ANGL S FR

Rev.—Mint-mark crown; QVIVITVS LONDON
[PL XIII. 10.] F. A. W.

2. *Obv.*—Mint-mark crown; legend as last; cusps of tressure over crown and on breast not fleured; trefoils instead of quatrefoils at sides of neck.

Rev.—Mint-mark crown, as last.

3. All as No. 1, but cusps of tressure over crown not fleured.

Pennies.

1. *Obv.*—Mint-mark crown. EDWARD DI GRX REX
ANGL Quatrefoils at sides of neck.

Rev.—QVIVITVS LONDON Usual cross and pellets.

2. *Obv.* and *Rev.*—All as last, but reads ANG

Halfpenny.

Obv.—Mint-mark crown. EDWARD DI GRX REX
Trefoils at sides of neck.

Rev.—QVIVITVS LONDON

COINS OF THE PROVINCIAL ROYAL MINTS WITH THE
CROWN MINT-MARK ONLY.

BRISTOL.

Ryal.

Obv. and *Rev.*—Usual design and legends of other ryals; B in waves under ship; mint-mark sun on reverse only.

Half-ryal.

Mint-mark crown on reverse only ; B in waves under ship.
British Museum.

Groats.

1. *Obv.*—Mint-mark crown ; quatrefoils at sides of neck ;
B on breast.

Rev.—Mint-mark crown. VILLπ BRÆSTOLL

2. *Obv.* and *Rev.*—As last, but BRISTOLL

3. All as No. 1, but BRISTOW

Half-groats.

1. *Obv.*—Mint-mark crown ; quatrefoils at sides of neck.
πN6L ∫ FRπ Cusp on breast not fleured.

Rev.—Mint-mark crown. VILLπ BRISTOL

2. *Obv.* and *Rev.*—As last, but BRISTOW

3. *Obv.* and *Rev.*—Mint-mark crown. BRISTOLL

Pennies.

1. *Obv.*—Mint-mark crown. EDWπRD DI 6Rπ REX
πN6L Quatrefoils at sides of neck.

Rev.—VILLπ BRISTOLL [Pl. XIII. 14.]
British Museum.

2. *Obv.*—Mint-mark crown ; legend, &c., as last.

Rev.—VILLπ BRISTOW F. A. W.

Halfpennies.

1. *Obv.*—Mint-mark crown. EDWπRD DI 6Rπ REX
Trefails at sides of neck.

Rev.—VILLπ BRISTOV

2. *Obv.* and *Rev.*—As last, but quatrefoils at sides of neck.

CANTERBURY ROYAL MINT.

Half-groats.

1. *Obv.*—Mint-mark crown. $\Lambda\Omega\delta\text{L} \searrow \text{FR}$ Quatrefoils at sides of neck; all cusps of tressure fleured, except that on breast.

Rev.—No mint-mark. QIVITAS QVARTOR
Montagu Catalogue and Rashleigh.

2. *Obv.*—Mint-mark crown; cusps of tressure over crown and on breast not fleured; trefoils at sides of neck.

Rev.—As last.

3. All as last, but cusps of tressure over crown fleured.

Penny.

Obv.—Mint-mark crown. $\Lambda\Omega\delta$ Quatrefoils at sides of neck.

Rev.— QIVITAS QVARTOR [Pl. XIII. 13.]
F. A. W.

Halfpennies.

1. *Obv.*—Mint-mark crown. EDWARD DI GRÆ REX
Quatrefoils at sides of neck.

Rev.— QIVITAS QVARTOR

2. All as last, but trefoils at sides of neck.

DURHAM ROYAL MINT.

Penny.

Obv.—Mint-mark crown. EDWARD DI GRÆ REX
 $\Lambda\Omega\delta\text{L}$ Fleur-de-lys at each side of neck.

Rev.— $\text{QIVITAS DÆ} \div \text{RÆM}$ Quatrefoil after DÆ

DURHAM EPISCOPAL MINT.

Penny.

Obv.—Mint-mark crown; B (for Bishop Booth) to l. and quatrefoil to r. of bust. $\text{EDWARD DI GRÆ REX} \Lambda\Omega\delta$

Rev.— $\text{QIVITAS DÆ} \nabla \text{RÆM}$ Trefoil after DÆ

CANTERBURY ARCHIEPISCOPAL MINT.

There appear to be no ecclesiastical coins that can with certainty be ascribed to the period when the crown mint-mark was in use at the Royal Mint, but doubtless some of those with the pall and cross belong to it.

THE CROSS FITCHÉE MINT-MARK OF FIRST AND SECOND VARIETIES.

LONDON.

Ryal.

Mint-mark cross fitchée on reverse only; usual type and legends of other ryals.

Half-ryal.

None appear to have been so far discovered.

Quarter-ryal.

Obv.—Mint-mark cross fitchée. EDWARD DI GRÆ REX ANGL' & Y Usual shield, &c.; sun to l., rose to r.

Rev.—Cross fitchée with rose to l. EXALTABITVR IN GLORIA Trefoils between words.

[Pl. XV. 13.]

Angel.

Obv.—EDWARD DI GRÆ REX ANGL & FRANÇ DRS IB St. Michael slaying the dragon; cross in nimbus of angel; trefoil stops in legend.

Rev.—PARR GRVIA TVR SALVA NOS XPI RÆDEMPTOR Rosette at end of legend; the sun's rays above mast of ship; rose to l. and large sun to r. of cross; two trefoils in the field above ropes of ship. [Pl. XV. 11.]

British Museum and Rashleigh.

Groats.

1. *Obv.*—Mint-mark cross fitchée type 1 (not pierced); usual legend; trefoils at sides of neck; small trefoils as fleurs to cusps of tressure; R's with incurved tails.

Rev.—Mint-mark sun; usual legends.

2. *Obv.*—As No. 1, but reads DEI and FRANCIE
Saltire stops.

Rev.—Mint-mark sun; usual type and legends.

[Pl. XV. 1.] F. A. W.

3. *Obv.*—Mint-mark cross fitchée pierced; single trefoils
between words, and two at end of legend;
all cusps of tressure fleured; no trefoils at
sides of bust.

Rev.—Mint-mark sun; usual legends and type.

4. All as last, but cusps of tressure over crown not
fleured; no trefoils at end of obverse legend.

5. *Obv.*—Mint-mark cross fitchée; usual legends, &c.

Rev.—Mint-mark rose; otherwise usual type.

Col. H. W. Morrison.

Half-groat.

Obv.—Mint-mark cross fitchée. $\text{AR} \text{EL} \text{' } \text{S} \text{ } \text{FR} \text{A}'$
Trefoils at sides of neck and as stops in
legend; one cusp of tressure over crown
fleured.

Rev.—Mint-mark sun. CIVITAS LONDON

[Pl. XV. 5.]

Pennies.

1. *Obv.*—Mint-mark cross fitchée. EDWARD DI GRA
REX AR EL Trefoils at sides of neck.

Rev.—CIVITAS LONDON [Pl. XV. 7.]

From the Wakeford, Brice, Montagu, and Murdoch
Collections. F. A. W.

2. *Obv.*—Cross fitchée; reads AR 6; no trefoils in field.

Rev.—CIVITAS LONDON. [Pl. XV. 12.]

F. A. W.

Halfpenny.

1. *Obv.*—Mint-mark cross fitchée. EDWARD DI GRA
REX π Trefoils at sides of neck.

Rev.—CIVITAS LONDON

British Museum.

2. *Obv.*—Cross fitchée (short) ; no trefoils in field.

W. T. Ready.

N.B.—Hawkins describes several half-pennies (mostly ascribed to the late Mr. Cuff) with unusual and unaccountable emblems and mint-marks which I have been unable to verify.

YORK ARCHIEPISCOPAL MINT.

Penny.

Obv.—Mint-mark cross fitchée; reads $\pi\Omega 6$ 6 to l. and key to r. of bust.

Rev.— $\alpha\iota\iota\upsilon\tau\alpha\varsigma$ $\epsilon\beta\omicron\rho\alpha\iota\iota$

GROATS, &C., POSSIBLY STRUCK BY AUTHORITY OF EDWARD IV, DURING HIS ABSENCE FROM ENGLAND IN 1470-71.

1. *Obv.*—Mint-mark crown. $\epsilon\delta\omega\tau\alpha\rho\delta$ $\iota\iota$ $\epsilon\rho\alpha$ $\rho\epsilon\chi$ $\pi\Omega 6\text{L}$ ζ $\text{FR}\pi\Omega\alpha\upsilon$ Unusual bust with quatrefoils in field ; trefoil stops.

Rev.—No mint-mark. POSVID $\epsilon\upsilon\omega\pi\delta$ $\iota\upsilon\tau\omicron\rho$ $\epsilon\omega\epsilon\upsilon\omega$ $\alpha\iota\iota\upsilon\tau\alpha\varsigma$ LONDON

Wt. $46\frac{1}{2}$ grs. [Pl. XV. 14.] F. A. W.

2. *Obv.*—Mint-mark rough copy of cross fitchée; legend ends $\text{FR}\pi\Omega\alpha\upsilon\varsigma$; otherwise as last; trefoil stops.

Rev.—All as last.

Wt. $42\frac{1}{2}$ grs. (worn).

F. A. W.

3. *Obv.*—Mint-mark and legend as last. $\text{FR}\pi\Omega\alpha\upsilon\varsigma$

Rev.—No mint-mark. POS $\delta\epsilon\upsilon$ $\omega\pi\delta\iota\upsilon$ α $\text{TOR}\epsilon\omega$ $\omega\epsilon\upsilon\omega$ γ $\alpha\iota\iota\upsilon\tau\alpha\varsigma$ $\epsilon\beta\omicron\rho\alpha\iota\iota$

British Museum.

Half-groats.

Obv.—Mint-mark sun (?). $\epsilon\delta\omega\tau\alpha\rho\delta$ $\iota\iota$ $\epsilon\rho\alpha$ $\rho\epsilon\chi$ $\pi 6\text{L}\epsilon$ $\text{FR}\pi\Omega\alpha\upsilon\varsigma$ Quatrefoils at sides of neck ; unusual bust.

Rev.—No mint-mark. POSVI $\delta\epsilon\upsilon\omega$ π . . . $\circ\text{RE}$ $\omega\epsilon\upsilon$ - $\alpha\iota\iota\upsilon\tau\alpha\varsigma$ LONDON

Wt. $18\frac{1}{2}$ grs. (worn).

F. A. W.

These coins are all of fine silver, which, together with their weight, appears to preclude the idea that they are contemporary forgeries.

In the foregoing list of coins, I have endeavoured to note every variety that appeared to have any meaning, but in order not to be too lengthy, I have not thought it necessary to give all the evidently merely accidental variations in some of the legends, or all the varied positions of stops.

FREDK. A. WALTERS.

at Baghdad through his younger brother Muizz-ad-dauleh, while he prosecuted further conquests in Georgia and Tabarestan. In 356 A.H. (966 A.D.) Muizz-ad-dauleh died of a flux, and was succeeded by his son Bakhtiar, surnamed Izz-ad-dauleh, a worthless prince, "given up to women and singers," and possessed of but one idea, that of blackmailing his unfortunate subjects. Nor was even the Khalifa secure from his requisitions, as the reigning representative of the prophet found to his cost. In spite of his protest that nothing was left to him save the empty honour of his title and the prayers of the faithful, the unhappy Al Mutieh was compelled to sell all his furniture and pay the proceeds, some 40,000 "drachmas," over to Izz-ad-dauleh, his protector and lieutenant.

Bakhtiar's tyranny and licence afforded Azad-ad-dauleh his opportunity. In 357 A.H. (967 A.D.) the latter seized Kerman, and when in 364 A.H. Bakhtiar found himself in trouble with his Turkish troops, Azad intervened, entered Baghdad, and forced Bakhtiar to abdicate. Rukn-ad-dauleh, however, strongly disapproved of his son's action, and upon the receipt of a complaint from Marzban, the son of Izz-ad-dauleh, he compelled Azad to restore the deposed prince and to retire from Irak.

In 366 A.H. (976 A.D.) Rukn-ad-dauleh died. The supreme power throughout the Buwayhid dominions he left to Azad, while under their elder brother's suzerainty Hamadhan with the mountain district and Ispahan with the adjoining territory were bequeathed to Fakhr-ad-dauleh and Muwayid-ad-dauleh respectively. His father being out of the way, Azad renewed his aggressions upon Irak. Bakhtiar was defeated at Aliwaz, and Basrah

occupied. In 367 A.H. Azad again entered Baghdad, and after some trouble defeated and slew Izz-ad-dauleh, who had allied himself with Abu Taglib, the Hamdanid of Mosil.

Azad was hardly securely seated in Irak when his brother Fakhr-ad-dauleh thought fit to challenge his supremacy. Whether Fakhr's hostility was due to Azad's interference in his special dominion (as Abul Fida would seem to imply), or whether Fakhr aspired to substitute himself for his elder brother in the paramountcy, is not clear. In any case the issue was not long in doubt. Azad was supported by his other brother Muwayid, and the two drove Fakhr from Hamadhan and Rhé. He took refuge with the Emir Kabus, the Ziyarid, in Tabarestan, while his territory passed to the loyal brother Muwayid. Azad endeavoured to induce Kabus to hand over Fakhr, and on Kabus refusing, he invaded Tabarestan, and expelled the honourable but unfortunate ruler.

Azad was now at the height of his power. He married a daughter of the Khalif Al Taieh, and received presents from the prince of Arabia Felix. His court was attended by scholars and poets, among whom he himself had some title to be counted. As a governor he ranks among the greatest of the Buwayhids. The taxes levied upon pilgrims to Mekka were abolished, the ministers of religion were provided with regular means of subsistence, and efforts were made to relieve the poverty and destitution prevalent in the country. The ruined buildings in the capital were restored, a great embankment was made over the Kur river, and hospitals were erected and endowed in Baghdad. On the other hand, in order to pay for his munificence and charity, Azad was compelled

VIII.

SOME SILVER BUWAYHID COINS.¹

(See Plates XVI., XVII.)

IN an article which appeared in the *Numismatic Chronicle*, in Part II., 1903, I discussed two silver coins connected with the Buwayhid dynasty of Irak and Persia. Since my return to India, I have been fortunate enough to secure several more, some of which are, I believe, unedited, while most of them are interesting as illustrating the somewhat fragmentary history of that dynasty.

Curiously enough, the coins with which this article deals, though not procured upon any systematic plan, form a tolerably homogeneous group, with possibly one exception. That is to say, they relate to one only of the

¹ The most important original authority for the Buwayhids is the annalist Abul Fida, the gist of whose account, combined with gleanings from other sources, will be found in Major David Price's *Chronological Retrospect or Memoirs of the Principal Events of Mahomedan History*, vol. ii. Price's work is based upon the study of original Persian authorities, a task for which he was well qualified, being a servant of the Honourable East India Company, to whom he dedicated his book, which was published in 1812. Shorter references to this dynasty will be found in Gibbon's *Decline and Fall*, Sir J. Malcolm's *History of Persia*, published in 1815 A.D., and (among modern authorities) in Vambéry's *History of Bokhara*, Lord Curzon's *Travels in Persia*, and S. Lane-Poole's *Mohammadan Dynasties*. A useful edition of Abul Fida's *Muslem Chronicles*, with notes and a parallel Latin version by J. J. Reiske, was produced in 1791 by J. G. C. Adler.

great Buwayhid Houses, and that the one of which in its later developments comparatively little is known. The series begins with issues of Rukn-ad-dauleh, and terminates with coins bearing the name of Muhammad bin Dushmanzar, commonly known as Ibn Kakwayh, or "The son of an Uncle." It includes also mintages of Azad-ad-dauleh, Muwayid-ad-dauleh, Majad-ad-dauleh, Sama-ad-dauleh, and perhaps, of Sultan-ad-dauleh.

The last excepted, all these princes belonged to the same line, the head of which was Rukn-ad-dauleh Abu Ali Hasan, one of the three brothers, the sons of Buwayh of Dilem, or Daylam, who became to the Abbassid Khalifate what the Brahmin Peshwas were to the house of Shivaji. Rukn-ad-dauleh possessed himself of the Persian provinces of Hamadhan and Ispahan. Fars, or Persis, was retained by Imad-ad-dauleh the eldest of the three brothers, who, according to Abul Fida, permitted the youngest brother, Muizz-ad-dauleh, to manage Irak and Baghdad as his deputy. In 338 A.H. (949 A.D.) Imad was prostrated with a kidney complaint. Foreseeing his end, he asked his brother Rukn to send him his eldest son Azad-ad-dauleh Fana Khusru, whom, having no male children himself, he designed to make his heir. "Thus," says the chronicler, "while Imad yet lived his nephew was granted the name and authority of a Sultan." Imad-ad-dauleh duly died, and Azad became the ruler of Persis; but his father Rukn, evidently thinking him too inexperienced to be left unsupported, came himself to Shiraz and established his son's rule on a firm basis.

The general power and dignities of Imad, in fact, passed to Rukn-ad-dauleh, who, however, preferred to remain in his own territory and to exercise his authority

at Baghdad through his younger brother Muizz-ad-dauleh, while he prosecuted further conquests in Georgia and Tabarestan. In 356 A.H. (966 A.D.) Muizz-ad-dauleh died of a flux, and was succeeded by his son Bakhtiar, surnamed Izz-ad-dauleh, a worthless prince, "given up to women and singers," and possessed of but one idea, that of blackmailing his unfortunate subjects. Nor was even the Khalifa secure from his requisitions, as the reigning representative of the prophet found to his cost. In spite of his protest that nothing was left to him save the empty honour of his title and the prayers of the faithful, the unhappy Al Mutieh was compelled to sell all his furniture and pay the proceeds, some 40,000 "drachmas," over to Izz-ad-dauleh, his protector and lieutenant.

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to raise the land tax, to place a duty on cattle, and to create a monopoly of the sale of ice. Good as he was for an Oriental ruler of the time, it must not be supposed that he lacked the defects of his qualities. Ambition and arrogance mark both his acts and his writings, while his cruelty is exemplified in the treatment dealt out to his father's Vizier, to the Vizier of Bakhtiar, and to Bakhtiar himself.

In 372 A.H. Azad died of epilepsy, and his death was followed by that of his brother Muwayid in 373 A.H. The removal of his two enemies enabled Fakhr to return and regain his dominions. He was recognized by the Khalif, but the recognition does not appear to imply any exercise of power in Irak, where Samsam-ad-dauleh, the son of Azad, now held sway. The latter was eventually deposed by his brother Sharaf, and blinded, to be restored in 380 A.H. by another and rather ironical turn of Fortune's wheel, to rule in Persis just after his eyes had been seared. Sharaf was succeeded by Baha-ad-dauleh, who reigned, according to Abul Fida, for twenty-four years in Irak and Fars. Fakhr-ad-dauleh did indeed venture one attempt to substitute his authority for that of Baha in Irak, but, a panic seizing his troops, he was compelled to retire precipitately to Rhé, and thence to Hamadhan. In 378 A.H. Fakhr died, leaving considerable wealth behind him, and was succeeded by his son Majad, a boy of four years old.

Majad's mother, Seydah, was appointed regent during his minority. She was the daughter of one Kurdish chief and the sister of another, by name Dushmanzar. A story, to which currency has been given by Gibbon, from whom it has been borrowed by most writers upon the period, connects this princess with the great Mahmud of

Ghazni. It is related that Mahmud prepared to invade Persia during the minority of Majad, and sent an embassy to the regent, bidding her to submit or to prepare for war. Seydah threw herself upon Mahmud's magnanimity, and replied that she knew his character well: he would never attack a weak woman from whose conquest no glory was to be won, while a repulse would send his shame ringing down the ages. Her feminine tact is said to have prevailed, and Mahmud reserved the blow till Majad's minority should be completed, when he advanced with an army and reduced the country.

Unfortunately for so pretty a story, there seems little evidence in its favour. Abul Fida knows nothing of it, and Price ignores it. If Majad was four years old in 387 A.H. (997 A.D.), his minority would probably have terminated when he was fifteen or sixteen, if not earlier, *i.e.* about 400 A.H.; but Mahmud's invasion did not take place till 420 A.H., when Majad must have been a man of thirty-three years of age, and had long been independent of petticoat domination. As a matter of fact, we find that as soon as he reached puberty the "ungrateful stripling" (as Price calls him) attached himself to a "vizier of dubious fidelity," and bade defiance to that "respectable dowager," the regent. The Governor of Luristan came to the help of the widow, and the two defeated Majad and his "obnoxious vizier." Majad was taken prisoner, and Seydah ascended the throne as Queen *de jure* and *de facto*, whereupon the Luristan governor retired, amply compensated by the marks of the Queen's bounty. So long as she reigned, Seydah was a model queen, but after some time, feeling able to overlook her son's youthful outbreak, she permitted him to reascend the throne. During her lifetime things went well with

Majad and the country: "when she died prosperity and order appeared to have descended with her into the grave."

According to Abul Fida, in 398 A.H. the mother of Majad-ad-dauleh appointed her nephew Ala-ad-dauleh Abu Jafar Sheheriar Muhammad, surnamed "Ibn Kakwayh," as governor in Ispahan, "in which position the man got together great resources." Ibn Kakwayh was the son of Dushmanzar, Seydah's brother. Seydah married the powerful and wealthy Buwayhid, Fakhr, and on his death she appears to have (perhaps unwittingly) enabled her nephew eventually to enjoy her husband's wealth and territories at the expense of the lineal heir, Majad-ad-dauleh, the son of Fakhr.

It would appear that Majad had not obtained direct power over all his father's territories, or that, if he had, Hamadhan passed later to another scion of the same line, Sama, the son of Shams-ad-dauleh, and grandson of Fakhr. Here too the cuckoo-like Ibn Kakwayh intruded himself, and in 414 A.H. (1023 A.D.) Hamadhan passed into his hands out of those of Sama-ad-dauleh. Ibn Kakwayh then proceeded to build up what was practically an independent principality. He annexed Dainawar and Sabur, and began to threaten the territories of the neighbouring powers. Cunning and unscrupulous as he was, an opponent with whom he could not presume to measure himself was at hand. Mahmud of Ghazni swept over Persia in 420 A.H., took Rhé and with it Majad, whose troops appear to have invited Mahmud's invasion. Majad voluntarily handed himself over to the enemy, to Mahmud's contemptuous amazement. The conqueror spared his life, but shut him up in Ghazni for the rest of his days. Ibn Kakwayh probably bent before the

storm and became the vassal of the Ghaznavid, retaining thereby the immediate possession of his lately acquired territories. We find him repelling the Turks from Ispahan when the cruelties of Mahmud's lieutenants in Khorassan forced them to migrate thence, and we also learn that Masud the son of Mahmud was in Ispahan when the latter died. Masud had been constituted Governor of Irak and Rhé, an appointment which probably carried with it a suzerainty over the lands still held by Ibn Kakwayh, who, in any case, was able at his death in 443 A.H. (1041 A.D.) to bequeath Hamadhan and Ispahan respectively to his two sons Kerchasp and Firamurs.

In Fars and Irak, in 403 A.H., Baha-ad-dauleh, the youngest son of Azad, was succeeded by Sultan-ad-dauleh, father of Imad-al-din abu Kalinjar. The last-named prince gained Fars in 415 A.H., Kerman in 419 A.H., and in 423 A.H., according to Abul Fida, he was invited by the garrison of Baghdad to occupy Irak, Jalal-al-dauleh having been temporarily expelled. He failed, however, to arrive in time, and lost his opportunity, though, if the evidence of the coin discussed in the previous article is worth anything, he reasserted his pretensions in 427 A.H., but without permanent success. Not till 435 A.H. was he able to establish himself securely in the capital. His power rose to a considerable height, so that he was able to intervene with effect in the affairs of even so distant a state as Oman. While he lived the Turks failed to obtain any important success in Persia except at Hamadhan, from which they drove the son of Ibn Kakwayh, who took refuge with Abu Kalinjar. But upon the death of the latter in 440 A.H., the Buwayhid power fell utterly to pieces and with it perished that of the Kakwayhids,

Ispahan being taken by Sultan Togrul Beg, after a siege of nearly a year, in 443 A.H.

Of the coins under review the first three seem to belong to Rukn-ad-dauleh. Unfortunately, neither the dates nor the mints are perfectly clear, nor is the name "Rukn" always readily distinguishable on the coins from "Fakhr." These three, however, all bear the name of the Khalif Al Mutieh, who ascended the throne in 334 A.H., and was compelled to abdicate in 363 A.H. Rukn-ad-dauleh did not die till 366 A.H. Hence the attribution of the coins to Rukn is probably correct. The fact also that they bear the name of no other Buwayhid prince tends to confirm this attribution, since Rukn-ad-dauleh was undoubtedly supreme after the death of Imad in 338 A.H. Nos. 1 and 2 correspond to a certain extent in style and inscription, though there are minor differences. Both bear the name of "Ali" after that of "Muhammad," thus testifying to the Shiite principles of the prince. It is also noticeable that on one side of them the title "Shah-an-Shah" is attached to the name of "Rukn-ad-dauleh." They are both from the same mint apparently, though what the exact name of the mint is I cannot say. On neither coin do the legends agree with those on the specimens of Rukn-ad-dauleh given in the British Museum *Catalogue* and its *Supplement*. The third coin differs very considerably in style and legend from the two just described, and apparently comes from the Ispahan mint.

Coins Nos. 4 and 5 bear the name of "Azad-ad-dauleh" in addition to that of "Rukn-ad-dauleh," and also (though here the legend is not very clear) that of the Khalif Al Mutieh. They must therefore belong to that period of Azad's career during which he was reigning in Fars

subject to his father's authority. To Rukn's name are attached the words "Abu Ali Buwayh," and to that of Azad "Abu Shajah," but neither bears any specific title. The date on one is partially destroyed, the words for "three hundred" and "four" only being legible, and the decade between them being missing. On the other (No. 5) the date is fairly plain, viz. 353 A.H. The mint appears to be "Arrajan" on both coins.

No. 6 is a more interesting coin than those immediately preceding it, although poorly struck and in indifferent preservation, two facts which render its legends very difficult to read. Careful scrutiny under the glass, however, reveals the following names: "Azad-ad-dauleh," "Abu Shajah," and "Muwayid" (ad-dauleh), "Abu Mansur" on the one side, and on the other "Al Mutieh," and, apparently, "Rukn-ad-dauleh Abu Ali." Now, Al Mutieh died in 363 A.H. Consequently, this coin should be prior to that date. But Rukn-ad-dauleh died in 366 A.H., and Muwayid, his second son, did not come into his inheritance until after his death. A second coin of Muwayid, recently acquired, also bears the names of Al Mutieh, Azad and Rukn-ad-dauleh. Its date appears to be 364 A.H. The explanation, perhaps, is that Muwayid was installed in Ispahan several years before the death of Rukn-ad-dauleh, and as the vassal of Azad.

The remaining coins form a most interesting group by themselves. No. 7 is clearly dated 414 A.H., and bears the names of "Majad-ad-dauleh" and "Muhammad bin Dushmanzar," together with that of "Al Qadir billah," the Khalif (who succeeded Al Taieh in 381 A.H.), and that of "Sama-ad-dauleh," who is styled apparently "Amir-al-Amara." No. 8, though very badly struck, appears to agree with No. 7 as regards the names of

the rulers given. "Sama-ad-dauleh" is quite plain, as too is "Muhammad bin Dushmanzar," while traces of "Al Qadir" and "Majad" are also visible. The date and the mint are lost. Nos. 9 and 10, though in quite a different style, also give the same names, but add after "Muhammad bin Dushmanzar" what seem to be the words "Al Hamed." Over **وحده, شريك** and **القادر** in both coins are curious signs which resemble the Persian letter **ر** (*ré*). They seem to have no relation to any word in the legend, and I cannot find any similar signs on parallel coins figured in the *B. M. Catalogue of Oriental Coins*, vol. ii., or in its *Supplement*. In both cases the margins are practically missing.

The legends are specially remarkable and important from the historical point of view. No. 7 appears to have been struck in the very year when, according to Abul Fida, Ibn Kakwayh got possession of Hamadhan, and it is interesting to note that, though the mint-name is nearly gone, the letters "dhan" (**اذان**) can be made out. Our historian does not relate the final fate of Sama-ad-dauleh, but if any inference may be drawn from this series of coins, we may presume that the usurper continued to reign in the name of the Buwayhid, whose superscriptions and dignities he retained upon the coinage, while adding his own appellation thereto. Perhaps Sama-ad-dauleh was merely imprisoned or confined to his palace, and not put to death. The fact that the name of Majad also occurs upon the coins tends to support this view. No doubt Majad had claimed suzerainty over Hamadhan, and, though he too was perhaps under Ibn Kakwayh's thumb, it probably suited that politic chieftain to acknowledge his titular supremacy, thereby preventing any direct interposition on his part in favour of

Sama-ad-dauleh. Majad, moreover, still affected the style and bearing of a sovereign power, as is shown by the title "Shah-an-Shah" accorded him on these coins, and his court was sufficiently important to attach such a *savant* as Ibn Sina (Avicenna), who, however, eventually passed over first to Kabus and thence to Ibn Kakwayh.

As to Sama-ad-dauleh himself, next to nothing is known. He was the son of Shams-ad-dauleh (a brother of Majad), and, unless his father was considerably older than his uncle, can have been little more than a boy at the time of Ibn Kakwayh's usurpation. It is therefore the more curious to find associated with his name on these coins so lofty a title as "Amir-al-Amara." Presumably it had been granted him by the Khalif Al Qadir: why or how, we cannot say. Possibly Ibn Kakwayh had for his own ends exerted his influence to acquire this special dignity for one who was little more than a puppet prince.

The last coin on the list I was at first inclined to assign to Shams-ad-dauleh, the father of Sama. The state of the legend, however, is not such as to furnish any very legible evidence, and the general character of the piece resembles rather that of the coins of Sultan-ad-dauleh, son of Baha-ad-dauleh and father of Imad-al-din Abu Kalinjar. The words "Abu Shajah" (the appellation of Sultan-ad-dauleh) are fairly legible, and there are two rosettes, or stars (?), at the foot of the reverse, which appear in keeping with those on the coins of this prince given in the British Museum *Catalogue*. The titles "(Amir)-al-Amara" and "Shah" are also visible. Sultan-ad-dauleh succeeded his father in Irak, but he preferred to live at Ahwaz rather than at Baghdad, and his supremacy was soon challenged by his brother Musharif, to

whom eventually he resigned Irak, retaining Fars and Kirman for himself. He died in 415 A.H. at Shiraz.

NOTE.—Since this article was written I have acquired two gold pieces of Izz-ad-dauleh, and one silver one of Ali bin Buwayh (with no further appellation). The last bears the name of the Khalif Al Muttaqi, the date 331 A.H., and mint (1) Shiraz. The gold coins both bear the names of Izz-ad-dauleh abu Mansur Buwayh, Rukn-ad-dauleh abu Ali Buwayh, and Al Mutieh; dates 358 and 362 A.H.; mint, Medinat al Salam in both cases.

DESCRIPTION OF THE COINS.

No. 1. Rukn-ad-dauleh [Pl. XVII. 4].

Obv. area.—

لا اله الا الله
المطيع لله
ركن الدولة

At the top of the area, in very small type, are some words which seem to be شاهان شاه. The first two words are indistinct, the last fairly clear. At the bottom there seems to be a letter following the ن of ركن, but it is probably merely a flourish.

Margins: (a) Inner—

بسم الله ضرب هذا الدرهم بفرير (1) سنة خمس وثلاثين (1)
وثلاث مائة

The mint-name is, perhaps, "Firim." The date is doubtful: it looks more like 365 than 335 A.H., but the former figure does not agree with the name of Al Mutieh, who died in 363.

(b) Outer—

لله الامر من قبل ومن بعد ويومئذ يفرح المؤمنون بنصر الله

Rev. area.—

الله
 محمد
 رسول الله
 على ولي الله
 ح

In the left-hand corner of the top of the area is a floral scroll. The area is enclosed in a double circle.

Margin.—

محمد رسول الله ارسله بالهدى ودين الحق ليظهره على
 الدين كله ولو كره المشركون

The margin is contained in two circles, of which the inner is very thin, the outer broad.

No. 2. Rukn-ad-dauleh [Pl. XVII. 6].

Obv. area.—Legend as in obverse area of No. 1, but the words in small type are absent, and the area is not bounded by any circles.

Margins: (a) Inner—

بسم الله ضرب هذا الدرهم بقرين (?) ملمر... (?) منه ثلث
 وستين وثلث مائة (?)

The mint-name in part resembles that on the previous coin, but it evidently consists of more words, and the latter part is indistinct. The date is also obscure.

(b) Outer: as in corresponding margin of No. 1, but in part effaced. This margin is contained in a broad circle.

Rev. area.—As in reverse area of No. 1.

At the top right-hand corner is a floral scroll. The area is contained in a single circle.

Margin.—As in corresponding margin of No. 1. The margin is contained in a single thin circle.

No. 3. Rukn-ad-dauleh [Pl. XVII. 5].

Obv. area.—

لا اله الا
 الله وحده
 لا شريك له
 ركن (?) الدوله

The first word in the last line is uncommonly like *فخر* (i.e. Fakhr), but, in view of the date, *ركن* seems to be the right reading.

Margins : (a) Inner—

بسم الله ضرب هذا رهم بصبهان (?) سنة واحدى وستين
 وثلاث مائة

The mint-name and date are here also obscure in parts. There is no circle between this margin and the area.

(b) Outer : As in corresponding margin of No. 1. This margin is divided from the inner by a circle, and is itself bounded by two circles, one thick and one thin.

Rev. area.—

الله
 محمد
 رسول
 الله (?)
 المطيع لله

The area is enclosed in a circle. The last line is quite indistinct, and the rest is very blurred.

Margin.—As in corresponding margin of No. 1. Enclosed in a double circle.

No. 4. Azad-ad-dauleh [Pl. XVI. 3].

Obv. area.—

لا اله الا
الله وحده
لا شريك له
ركن الدولة
ابو علي بويه

Area is enclosed in a circle.

Margins: (a) Inner—

بسم الله ضرب هذا بارحان سنة اربع وثلاث مائة

The decade is quite lost. No circle divides this margin from the next.

(b) Outer: broken and effaced. First and last words of legend in corresponding margin of No. 1 are visible.

Rev. area.—

لا اله
محمد
رسول الله
المطيع لله
عضد الدولة
ابو شجاع

Area is contained in a double circle.

Margin.—Largely missing; parts of legend in corresponding margin of No. 1.

No. 5. Azad-ad-dauleh [Pl. XVI. 2].

Obv. area.—

لا اله الا
الله وحده
لا شريك له
ركن الدولة
ابو علي بويه

There is no circle round the area.

Margins : (a) Inner—

بسم الله صوب هذا الدرهم بارجان سنة ثلث وخمسن (?)
وثلث مائة

The mint is "Arrajan" plainly, but the exact date is not clear, the decade being very obscure. It looks, however, more like 50 than anything else.

(b) Outer : fragments of (?) corresponding inscription on outside obverse margin of No. 1. No circles, except at extreme edge.

Rev. area.—As in reverse area of No. 4.

Margin.—Part missing, but as in reverse margin of No. 1. The margin is divided from the area by a thin double circle.

No. 6. Muayyid- (or Muwayid-) ad-dauleh [Pl. XVI. 5].

Obs. area.—

لا اله الا ...
.... لا سريك له (?)
المطيع لله
ركن الدولة
ابو علي

Margins : (a) Inner : almost entirely obscured, but ثلث مائة legible.

(b) Outer : as in corresponding legend of No. 1. The coin is a broad thin piece, pierced near the bottom. The obverse has no circle between the area and marginal legends, or between the latter. Outside of these comes a circle, then a fairly wide vacant space, and at the extreme edge a double circle. The upper part of the area legend is almost effaced.

Rev. area.—

(?) لله
محمد
عبد الدولة
ابو شجاع
موييد
ابو منصور

The area is enclosed in a double circle. The letters of the legend are faint and broken, and many are quite obscured.*

Margin.—As in corresponding legend of No. 1. A single circle outside it, then an empty space, beyond which is a double circle.

No. 7. Muhammad bin Dushmanzar, with the names of "Majad" and "Sama-ad-dauleh" [Pl. XVI. 6].

Obv. area.—

نصر
لا اله الا الله
وحده لا شريك له
القادر بالله امير
الامرا سما الدوله
بوويه

The area is contained in a circle.

Margins : (a) Inner.—

بسم الله ضرب لمان (?) سنه اربع عشر اربع مائه

The date 414 H. is clear. The letters at the end of the mint-name point to "Hamadhan."

(b) Outer : Nil.

Beyond the inner marginal legend is a dotted circle with a pair of annulets at the top. Between the dotted circle and the edge there is a space.

Rev. area.—

الله
محمد رسول الله
شاهان شاه
مجد الدوله
محمد بن دشمنزار

Area is bounded by a circle.

* Since writing the above, I have acquired another coin of Muwayhid, dated apparently 364 A.H. The decade is not clear, and the name of the Khalif is illegible, but looks like "Al Mutich." The mint is obscure : it might be "Ispahan." The legends, so far as they are decipherable, agree with those of the above coin.

Margin.—As in corresponding legend of No. 1. Outside margin is a circle of dots, then a space, and then a double thin circle with a pair of annulets at its right-hand side.

No. 8. Muhammad bin Dushmanzar, etc. [Pl. XVI. 7].

Obv. area.—

(?) حلاح
لا اله الا الله
محمد رسول الله
القا بالله مجد (?)
الدوله امير الامرا
سما الدوله
ح

This side is badly struck; it probably slipped in the minting. I have not deciphered the top word. It may be *جناح*. The area is bounded by a circle containing small rings set near to each other, but not quite touching.

Margin.—Missing.

Rev. area.—

(?) على . . .
الله احد الله
الصمد لم يلدو
لم يولدو لم يكن
له كفوا احد
محمد بن دشمنزار

At the top come two words in small letters, of which the first looks like *على*, the other being undecipherable. The area is bounded by a circle similar to that on the obverse.

Margin.—A few traces of letters only visible.

No. 9. Muhammad bin Dushmanzar, etc. [Pl. XVII. 1].

Obv. area.—

لا اله الا الله
 وحده لا شريك
 القادر بالله
 امير الامراء سما الدولة
 بوقيه

Area is enclosed in a dotted circle. There is an illegible symbol above the first line. No marginal legend.

Rev. area.—

محمد رسول الله
 شاهانشاه
 مجد الدوله
 محمد بن دشمنزار
 الحمد

What the sign to the right of محمد is I cannot say. It may be part of شاه. The top line is very indistinct, but there is no doubt as to the words. The area is enclosed in a dotted circle, outside which are one or two faint traces of lettering.

No. 10. Muhammad bin Dushmanzar, etc. [Pl. XVII. 2].

Obv. area.—As on the obverse of No. 9, with dotted circle and no marginal legend.

Rev. area.—

الله
 محمد رسول الله
 شاهانشاه
 مجد الدوله
 محمد بن دشمنزار
 الحمد

Dotted circle round area. No marginal legend visible.

No. 11. (f) Sultan-ad-dauleh [Pl. XVII. 3].

Obv. area.—

ح ب <
لا اله الا الله
وحده لا شريك له
القادر (?)
سمص
ابو

I have not deciphered the symbols in the first line. What the word below the name "Al Qadir" is I can only conjecture. It may stand for Samsam (al dauleh). Round the area is a dotted circle. Faint traces of letters are visible in margin.

Rev. area.—

.... رسول لله
.... الامراء
ابو شجاع
سلطان الدولة
✽ ✽

Dotted circle round area and traces of legend in margin. Two rosettes (or stars) at foot of the area. The words in the last line, the form of which I have copied as exactly as I could, are in smaller type than the rest. I take them to stand for "Sultan-ad-dauleh." The area is bounded by a dotted circle. Traces of marginal legend of reverse of No. 1 are visible in margin.

NOTE.—In Pl. XVI., figures Nos. 1 and 4 illustrate the coins of the Okaylid Mu'tamid-al-dauleh and Inad-al-Din Abu Kalinjar, discussed in Part II., 1903.

J. G. COVERNTON.

IX.

MEMORIAL MEDAL OF JOSIAS NICOLSON.

(See Plate XVIII.)

I AM afraid that there is not very much to be said for the artistic beauty of the medal depicted on **PL. XVIII.** It is, at any rate, a genuine relic of the period, and meritorious as a sincere attempt at portraiture. It was for many years in my husband's cabinet, and is, so far as my knowledge goes, unique. It is now in my possession. Sir John had an electrotype made from it some years ago for the British Museum collection, and that electrotype is described in *Medallie Illustrations of British History*, vol. i. p. 597, No. 281, and figured in the recently issued illustrated edition of the same work, Plate lxii. 4, 1907. The editors there state, "Of the subject of this medal very little seems to be recorded. He lived at Clapham, and appears to have been a brewer. . . . He appears to have had a son of the same name as himself, who also resided at Clapham, and who died April 8, 1745," &c.

The medal is a memorial one of Josias Nicolson, made probably soon after his death. From the style of the hair and dress (he wears a cravat, a doublet fastened with a brooch, and a mantle), it appears to have been made in the reign of Charles II, i.e. about 1680-85. It bears no date. It represents the deceased as a man between 40

and 50 years of age—a three-quarter bust to the left. His hair is long, and probably represents a periwig. These were in ordinary wear about the date suggested for the medal. It will be remembered that Samuel Pepys (a tailor's son, with an inborn love of fine clothes and the newest fashions) dallies with the idea of assuming one so early as May, 1663, but has "yet no stomach for it." In November, 1663, "without more ado," he has his own hair cut off and pays £3 for a periwig. The fashion only gradually came into favour; the Duke of York assumes it in February, 1663-64, Charles II follows his example in April of the same year. The mode suffered some eclipse later, in 1665, when danger from infection of the Plague was abroad, but in 1668 the fashion seems firmly established at Court (Pepys, *Diary*, Feb. 15, 1663-64, and foll.). A dressy person like Pepys would certainly adopt it long before our homely brewer, however well-to-do.

The medal consists of two plates, cast and chased, and in high relief; the workmanship is rude. Its legend runs, "*In remembrance of Josias Nicolson.*" The legend is divided by four Death's heads. On the reverse Death (whose anatomy cannot claim to be represented with any scientific accuracy) appears, leaning on his spade. The reverse legend runs, "*Memento Mori.*"

I have not been able to establish the fact that this Josias Nicolson lived at Clapham. Manning and Bray (*History of Surrey*, vol. iii. p. 584, 1814) state that on the north side of the Free Grammar School of the Parishioners of St. Saviour's in Southwark, when the school was re-constructed after the Fire, there were inscribed the names of six of the governors of the period—May 24, 1676—of whom one is "Mr. Josiah Nicholson." He is not

promoted to the dignity of "Esqre.," though two others among the governors are so designated.

Among the weddings at St. Saviour's, Southwark, occurs the entry on Sept. 8, 1616, of the marriage of "Michaell Nicolson and Joane Brand."

Acting on a suggestion from Sir Alfred Scott-Gatty (Garter), who is always so ready to help in any similar inquiry, I have found the will of this Michaell Nicholson at Somerset House. It is dated March 20, 1644, and was proved Jan. 17, 1645-46 (7 Twiss P.C.C.).

He describes himself as "Michaell Nicholson, of St. Saviours, Southwark, co. Surrey, gentleman." He devises all his property in Bermondsey Street, St. Olave's, Southwark, to his brother Gabriel, and his rights in the Manors of Chipping and Over Norton, &c., in the county of Oxon. After many small bequests to relatives he leaves "to my brother Josias Nicholson 20 shillings and my sword." This brother would seem to be the person commemorated on our medal. He was evidently sufficiently well off to need no substantial legacy, only a token of good will. Gabriel, the other brother, is sole executor.

In 1683-84, March 7, we find the will of "Josias Nicolson" (the *h* is put in or omitted quite at random), "of the parish of St. Saviour's, Southwark, brewer." He leaves all the estate and stock-in-trade of his business in trust to certain fellow-citizens, to be sold. After legacies to his sister and his niece, he leaves £20 to his nephew, Nicolas Nicolson, son of his brother Gabriel. The testator seems to have married a widow, as he leaves a trifle to his "late wife's son, Samuel Wright." The will concludes by stating that the residue of everything is to go to his nephew, "Josias Nicolson, son of my said brother Gabriel, when he shall be 22 years old." This

will was proved March 21, 1683-84 (32 Hare P.P.C.). This date, or perhaps one slightly later, for the medal agrees with that approximately deduced, from the style of the hair and dress, by the late Sir A. W. Franks and Mr. Grueber (*Med. Illustr.*, i. 597, 281). But it would appear that Josias had no son of his own, as they assume, but that Josias Nicolson, the second, was his nephew, son of his brother Gabriel.

From the marriage allegations of the Vicar-General of 1693, Sept. 15, it appears that Josias the younger had duly attained the age of 22 years and come into his inheritance. On that day, "Josias Nicholson of All Hallows the Great, London, brewer, bachelor, about 26, and Mrs. Christian Cholmley of St. Olave's, Southwark, Co. Surrey, spinster, about 18," apply for a marriage licence, "with consent of Mr. John Cholmley, her brother, her parents being dead, at St. Martin's, Outwich, London."

From the dates given he would have been about 16 years of age at the time of his uncle's death. Richard Hammond and Thomas Cooper, to whom the brewing business was left "in trust to sell the same," by the subject of our medal, may have contrived that, by some means, the younger Josias came in for it, since he is described as "brewer."

The will of Josias the younger, dated Nov. 5, 1743, was proved April 22, 1745, by the Earl Verney and Felix Calvert (P.C.C. 119, Seymer). From this will it appears that the eldest daughter was married to John Knapp, Esq.; that the second daughter, Christian, was married to Felix Calvert, and had a portion of £10,000 (see *Herts Families*, "Calvert of Furneaux Pelham," Victoria County Histories: Genealogical Volume, p. 59, 1907); and that the third daughter, Mary (whose

portion was also £10,000) had been married to the Hon. John Verney. His father, Ralph, had succeeded his father, John, as third baronet, second Baron Verney of Beturbet, and second Viscount Fermanagh, in 1717. The eldest son, John, husband of Mary Nicolson, died in his father's lifetime, June 3, 1737. The father, Ralph, was made an earl in the Peerage of Ireland, 1742, and died in 1752.

A daughter, Mary, was born to Mary Verney in the October following the death of her husband, 1737. As heiress of the Verneys, this child was created Baroness Fermanagh in her own right in 1792 (not in 1812, as stated in *Herts Families*, p. 68), after the death of her uncle Ralph (*s.p.*), 1791. Mary Nicolson's husband, John Verney, was therefore clearly never styled "Viscount Fermanagh," as stated in *Med. Illust.*, i. p. 597, No. 281. After John Verney's death, his widow married, in November or December, 1741, Richard Calvert, of Hall Place, Bexley, LL.B. of Trinity Hall, Cambridge, afterwards Fellow of the College, and cousin of her sister Christian's husband. He died in 1782. She followed him in 1789, her will being proved by her two sons, Richard and George.

Their only daughter, Catharine, had married, April 5, 1785, the Rev. Robert Wright, of Middle Claydon, Bucks. Mary, Lady Fermanagh, died unmarried, Nov. 15, 1810, as recorded on her monument in Middle Claydon Church. She bequeathed the Verney estates in Bucks. to her half-sister, Catharine Wright, who assumed the name of Verney in 1811, and died (*s.p.*) in January, 1827, bequeathing the property to her kinsman Sir Henry Calvert, second Baronet (*Herts Families*, p. 63). He thereupon assumed the arms and surname of Verney.

At his death, Feb. 12, 1894, at Claydon, Bucks., the estates passed to their present possessor, his son, Sir Edmund Hope Verney, Bart., whose wife, the editor of vols. iii. and iv. of the *Verney Memoirs*, has helped me to verify some of these dates.

"Mrs. Christian Calvert, wife of Felix aforesaid" (to quote the monumental inscription to her memory, on the east wall of the chapel, south of the chancel in the church of Furneaux Pelham, as given by Clutterbuck, in his *History of Herts*, "Hundred of Edwinstree," vol. iii. p. 457), "and daughter of Josiah Nicholson, Esq., of Clapham, in Surrey," "died December 2nd, 1759, aged 64." Her will was proved Dec. 19 of the same year, by Mary Calvert, spinster, her daughter and executrix. Her eldest son had been born about 1719, but, while on a visit to his grandfather, Mr. Nicolson, at Clapham, he had been thrown from his horse, dragged from the stirrup and killed, Aug. 5, 1728 (*Genealogist*, new series, vii.). From this double mention of Clapham, it is evident that Josias Nicolson the second lived there, but I can find no mention of his uncle, commemorated on our medal, having done so.

Felix, the sixth but only son of Felix and Christian Calvert to leave issue, died by his own hand, March 23, 1802, aged 68 (*Gent. Mag.*). He left a son, Nicolson Calvert (born May 15, 1764, died April 13, 1841).

This Nicolson Calvert represented the borough of Hertford in Parliament in 1802, and again, at intervals, till 1820. From 1826 to 1834 he was Member for the county.

Nicolson, as a Christian name, was borne by several of his descendants. Nicolson Calvert, a brewer, of London, apparently the latest of the name, died in 1873.

The grandson of Nicolson Calvert, M.P., is Felix Calvert, the present owner of Furneaux Pelham, and J.P. for Herts.

The family of Calvert is not without numismatic interest. Felix Calvert (born 1596) was buried May 18, 1674 (see *Little Hadham Registers*, ed. by William Minet, F.S.A., Hadham Hall, 1907). His will (proved Oct. 21, 1674, P.P.C. 113, Bunce) is reported in the Little Hadham Court Rolls of 1676, as being dated Nov. 24, 1672 (note by Mr. Minet). He was described as a tallow-chandler. He married Susan Betts, of Colchester (she was buried Oct. 30, 1669, at Little Hadham). He seems to be the first of the pedigree, though there are possibilities of the family being traced back to some Netherlandish refugees, among whom were several brewers. Felix Calvert was in trade at Little Hadham, Herts, and is mentioned in the Little Hadham Court Rolls, 1672, 1673, as selling and holding lands. A farthing token of his is given in *Boyne's Trade Tokens* (ed. Williamson), vol. i. p. 319, No. 3.

Obv.—★ FELIX COLVART Shield, arms of Calvert.

Rev.—★ IN LITTLE HADDON In centre, F C; mullet above and below.



R. T. Andrews Collection.

His sons, Felix, Thomas, and Peter, farmed the excise of beer and ale, and had a flourishing brewing business,

first in St. Giles', Cripplegate, and afterwards in Thames Street (*Herts Families*, p. 53).

Felix, named in his father's will as eldest son, was baptized Feb. 15, 1623-24, at Great Hadham. He was progenitor of the Calverts of Furneaux Pelham, and married Joan Day, of Hadham, possibly Joan the daughter of Francis and Margret Day, baptized at Little Hadham, May 29, 1624 (*Little Hadham Registers*, Minet, p. 56). His will was proved (P.P.C. 70, Pell) May 10, 1699 (Clutterbuck, *History of Herts*, iii. 182).

He, like his father, issued a token (Boyne's *Trade Tokens*, ed. Williamson, vol. i. p. 309, No. 83. See also Cussan's *History of Herts*, "Edwinstree Hundred," p. 155).

Obv.—★ FELIX CALVERD = HIS HALF PENY Below, three roses.

Rev.—★ = OF FURNEXT PELHAM In centre, F I C (i.e. Felix and Joan Calverd), 1668, and three roses.



Evans Collection.

In 1677 he purchased the Mansion House of Furneaux Pelham, and the estate with the old and new parks (Salmon, *History of Herts*, p. 287). His son William was Sheriff of Cambridgeshire, 1690 (see Sir Henry Chauncy's *Hist. Antiq. of Herts*, ed. 1700, p. 145), and father of Sir William Calvert, Kt., brewer (died 1761), Lord Mayor of London 1748; and of his successor at Furneaux Pelham, Felix Calvert, baptized July 17,

1693, who married Christian Calvert, and, to quote his monument in Furneaux Pelham Church (Clutterbuck, iii. 457), died June 15, 1755, aged 61.

The third son of Felix Calvert of Little Hadham, was Peter, of Nine Ashes, Hunsdon, baptized at Little Hadham, May 4, 1630, whose grandson Richard married Mary (Nicolson), widow of the Hon. John Verney.

The Calvert estates in Essex, Cambridgeshire, Herts, and elsewhere, were considerable.

Since Josias Nicolson, second of the name, owed so much of his advancement in life to the bequest of his uncle Josias, whose portrait appears on the medal [PL. XVIII.], it is not unlikely that this medal was caused to be made by him as a mark of gratitude for his uncle's memory, perhaps at the time when "he attained the age of 22 years," and came into the property, *i.e.* about 1689.

MARIA MILLINGTON EVANS.

MISCELLANEA.

THE BARCLAY HEAD PRIZE FOR ANCIENT NUMISMATICS.

(From the *Oxford University Gazette*, June 15, 1909.)

"IN a Convocation of the University of Oxford, holden on Tuesday, June 15, 1909, the following form of Decree was proposed and carried *unanimis contradicente* :—

"*WHEREAS friends of Barclay Vincent Head, D.C.L., late Keeper of Coins and Medals in the British Museum, have offered to the University, with a view to perpetuate his memory by the foundation of a Prize for the encouragement of the study of Ancient Numismatics, a fund consisting of a sum already contributed and amounting to £111 15s. 6d., together with such additional sums as may hereafter be contributed in furtherance of the same objects;*

"*AND WHEREAS this fund has been augmented by gifts of £100 from the Delegates of the Common University Fund, £50 from the President and Scholars of Magdalen College, and £50 from Percy Gardner, M.A., Fellows of Lincoln College, Lincoln and Merton Professor of Classical Archaeology and Art, the University gratefully accepts the gifts, and decrees the establishment of the Prize under the conditions expressed in the following Regulations.*

"1. The fund shall be invested by the University, and the income arising from it shall be devoted to the maintenance of a Prize to be called the Barclay Head Prize for Ancient Numismatics.

"2. The Prize shall be of the value of £20, and shall be awarded for a Dissertation or Essay, whether published or otherwise, on a subject connected with Ancient Numismatics, not later than the beginning of the fifth century A.D.

"3. The Prize shall be open to all members of the University who, on the day appointed for sending in the Essays, shall not have exceeded twenty-seven Terms' standing from Matriculation.

"4. The Prize shall be awarded once in every three years, provided that a candidate of sufficient merit presents himself.

In the event of the Prize not being awarded in any particular year, an award shall be made in the next following year, if a candidate of sufficient merit presents himself in that year. But the next regular triennial award shall not be postponed by reason of any such special award.

"5. The Prize shall under no circumstances be awarded more than once to the same person, or more than once in any year.

"6. The management of the Prize shall be entrusted to the Committee for Classical Archaeology constituted under Tit. VIII, Sect. x. The Committee shall fix days on which the Essays are to be sent in, shall appoint Judges who shall award the Prize, shall determine the remuneration, if any, of such Judges, and shall make such other arrangements as may be necessary for carrying out these Regulations.

"7. In case no award is made in any year in consequence of there being no candidate of sufficient merit, or in case of any vacancy arising from any other cause, the Committee for Classical Archaeology may either direct the addition of the sums which accrue during the vacancy to the capital of the fund, or may employ them, in any manner that they may think desirable, in furthering the object for which the fund has been established, namely, the encouragement of the study of Ancient Numismatica by members of the University."

Subscribers to the Fund will be glad to learn that a further contribution has been received in the shape of the surplus of the fund which was raised some time ago in order to present a medal to Dr. Imhoof-Blumer. This surplus has been transferred to the Barclay Head Testimonial Fund by Dr. B. Pick, in the name of the subscribers to the Imhoof-Blumer Medal, and with the approval of Dr. Imhoof-Blumer himself.

G. F. H.

NOTICE OF RECENT PUBLICATION.

Mélanges Numismatiques, par Adolphe Dieudonné. Première série, accompagnée de 11 planches. Paris: Rollin et Feuardent; Picard et Fils. 1909.

FOLLOWING the example of other French scholars, M. Dieudonné has collected in a single volume the greater part of

his contributions to numismatic periodicals during the last ten years. The practice of thus reissuing articles in book form, although it may tend in some cases to give undue importance to comparatively ephemeral writings, has many compensating advantages. One can, for instance, usually remember the name of an author who has written on a particular subject, but not so easily where his article was published. It is convenient to be able to turn to an indexed volume of *Mélanges*. M. Dieudonné's writings deal for the most part with ancient numismatics. Among them we are especially glad to have his accounts of recent acquisitions by the French Cabinet; his useful article on Emesa (to which he plausibly assigns certain "Antiochene" silver coins hitherto given to Heliopolis); his essay on the latest pseudo-autonomous Roman coinage of Antioch (those little bronze pieces with IOVI CONSERVATORI & VICTORIA AVGG or GENIO ANTIOCHENI & APOLLONI (*sic*) SANCTO, which, with a similar coin of Nicomedia, he successfully proves to belong to the period of the tetrarchy, and not to that of Julian II); his publication of the coins of Juba II acquired from the remarkable find at El Ksar; and a paper on the "Antiochene" tetradrachms of the mint of Tyre. On some of the pieces described in this last paper, the eagle of the reverse stands on a club, but is not accompanied by anything else to connect it with Tyre. The question as to whether these are to be left to Antioch or not, M. Dieudonné hardly resolves; and it is not clear why he regards coins of this class struck under Nero and Vespasian as certainly Antiochene, while he thinks the Tyrian attribution of the later pieces at least open to discussion. M. Rouvier (whose lists, published in the *Journal International*, might have been referred to in this connexion) more logically lumps them all together. Among the articles not included in this volume is the still incomplete series from the *Revue Numismatique*, giving a "Choix de monnaies et médailles du Cabinet des France." We hope that these are reserved for a separate volume, which will do for the French Cabinet what Mr. Head's *Guide to the Coins of the Ancients* has done for the British Museum collection. If circumstances prevent the officials of the great European collections from publishing catalogues, they might well produce selections of this kind, which would render considerable service not merely to numismatists, but also to archaeologists in general.

G. F. H.



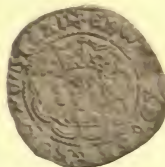
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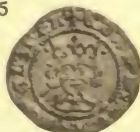
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10



EDWARD IV
EARLY HEAVY COINS

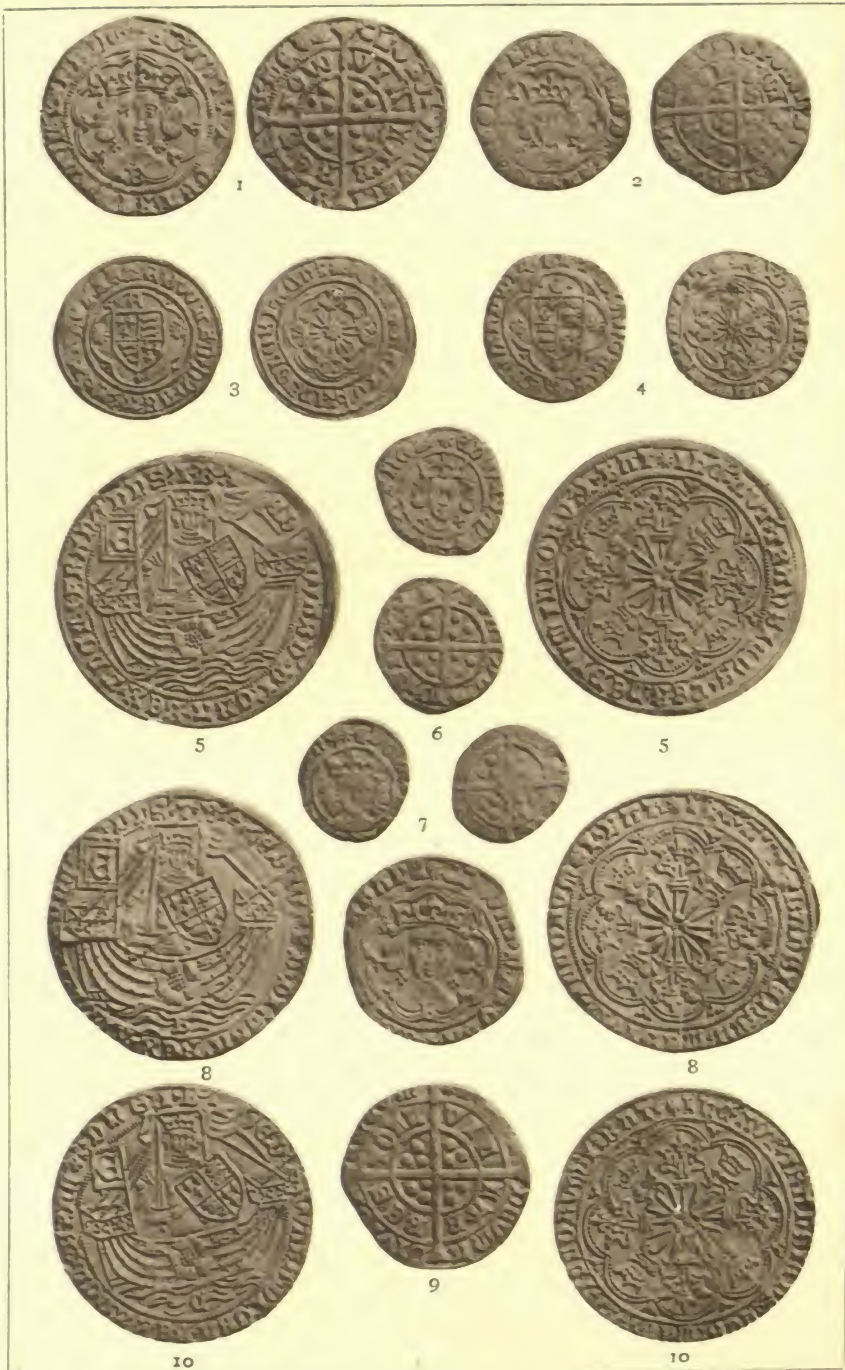




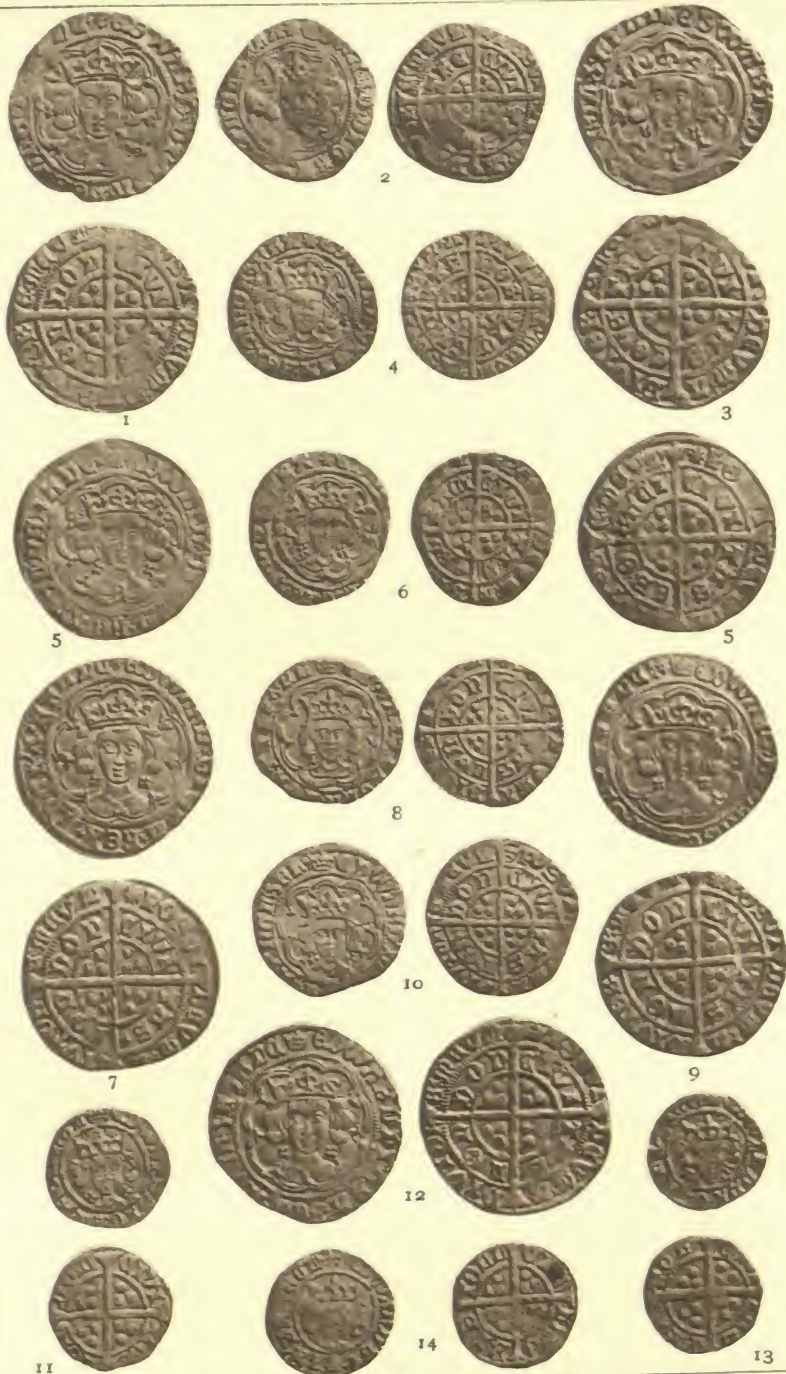
EDWARD IV
LATER HEAVY AND EARLY LIGHT COINS



EDWARD IV
LIGHT COINS—ROSE MINT-MARK PERIOD



EDWARD IV
LIGHT COINS WITH SUN MINT-MARK



EDWARD IV
COINS WITH SUN AND CROWN MINT-MARKS



1

3



4

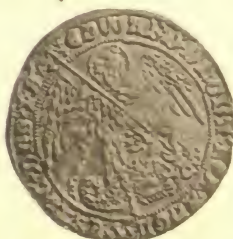
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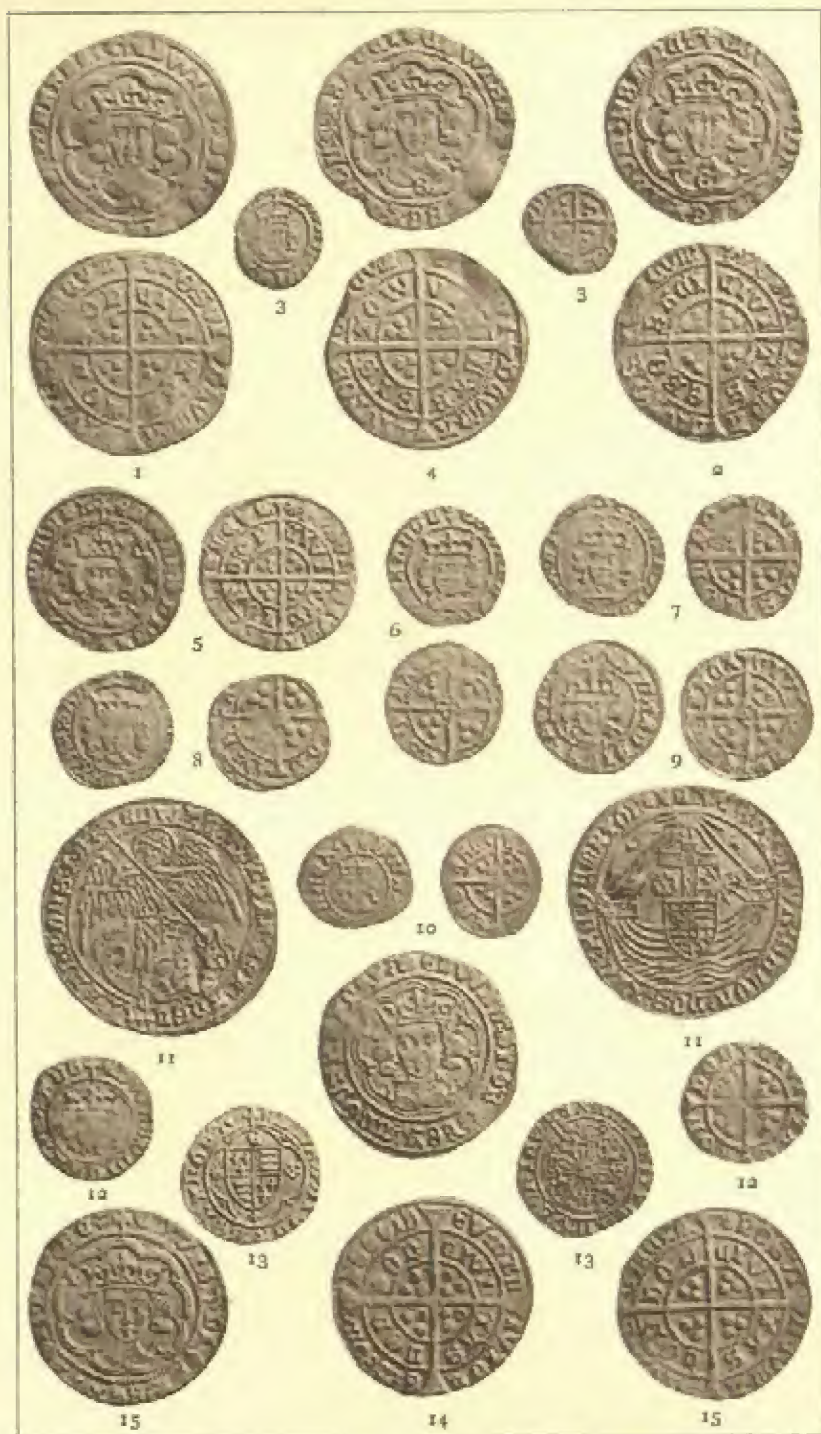


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9

COINS OF THE PERIOD OF THE SUN AND
CROWN MINT MARKS



COINS OF THE PERIOD OF THE CROSS
FITCHÉE MINT MARK



3

2



4

3

4



5

5



7

6

7

SILVER COINS OF THE BUWAYHIDS



1



2



2



3



4



4



5



6



5



MEMORIAL MEDAL OF
JOSIAS NICOLSON



X.

ON A RECENT FIND OF COINS STRUCK DURING THE HANNIBALIC¹ OCCUPATION AT TARENTUM.

(See Plate XIX.)

THE comparative rarity of the last series of silver coins struck at Tarentum during the Hannibalic occupation (c. 212-209 B.C.), and the uncertainty to which standard they belong, make me believe that numismatists may be glad to have an opportunity of studying the following small hoard of about 114 coins belonging to that period, which was discovered at Taranto last November.

According to the information which I have been able to collect, this hoard was found, in a fractured vase, at a depth of about three yards, during excavations near a well not far from the new Arsenal, in the *Borgo Nuovo*, within the Greek walls of Taras, close by the ancient *Batheia* road, which bordered the Mare Piccolo harbour.

Besides the silver coins, the vase contained also a beautiful gold ring and necklace, which I have been able to examine during a recent visit to Taranto. The finely preserved necklace consisted of a trellis of small annulets bearing a row of lanceolated pendants, the clasp being adorned with a filigree *anthemion* of a typical Tarentine design. The ring was in the shape of a

¹ Cf. A. J. Evans, *The Horsemen of Tarentum*, p. 197.

serpent, coiled in several spirals, the head and upper part of the tail chased in imitation of scales, with four inset garnets.

All the coins, except about twenty in brilliant condition, were more or less coated with a greyish oxide, beneath which they were covered with a thin lustrous blue-black patination. Judging from their general fine preservation, they were evidently all fresh from the mint at the time of concealment.

Though, unfortunately, I have not been able to study myself this find in its integrity, before its dispersal, I believe, however, the following account about correct.

A friend of mine, who examined the hoard immediately after its discovery, has been kind enough to give me an analysis of it, and to secure for my cabinet the only two specimens therein of the extremely rare and unpublished new type and denomination of the Tarentine magistrate ΣΩΓΕΝΗΣ, as well as a beautiful example of each other variety carefully selected for me.

Obverse.	Reverse.	No. of coins in hoard.	Av. weight of coins in fine condition.
TARENTINE UNITS.*			
1. ΚΑΗ ΞΗΡΑΜ ΒΟΞ (Evans, Type A, Pl. x. 9.)	TAPAΞ. Β [ĤPA].	25	grammes. 3.60
[Pl. XIX. 1.] Wt. 3.50 grammes.			
2. ΙΩ ΣΩΓΕ NHΞ (Evans, Type B, Pl. x. 10.)	TAPAΞ.	39	3.61
[Pl. XIX. 2.] Wt. 3.50 grammes.			
3. ΚΡΙΤΟΞ (Evans, Type C, Pl. x. 11.)	TAPAΞ. ΕΚ. Ι.	5	3.78
[Pl. XIX. 3.] Wt. 3.89 grammes.			

* For the description of types, cf. Evans, *op. cit.*, p. 210.

Obverse.	Reverse.	No. of coins in hoard.	Av. weight of coins in fine condition.
TARENTINE UNITS— <i>continued</i> .			
4. $\phi\iota\ \phi\iota\iota\alpha\pi\chi\omicron\varsigma$ (Evans, Type D, Pl. x. 12.) [Pl. XIX. 4.] Wt. 3.848 grammes.	TAPAΞ	9	grammes. 3.84
5. $\xi\Omega\text{KAN NA}\xi$ (Evans, Type E, Pl. x. 13.) [Pl. XIX. 5.] Wt. 3.75 grammes.	TAPAΞ	16	3.81
TARENTINE HALF-UNITS.			
6. Naked boy rider, crowning with r. hand his horse standing r.; in field to l. above, $\text{I}\Omega$; beneath horse, $\xi\Omega\Gamma\text{E}$ NHΞ	TAPAΞ (in field under). Taras, naked, astride on dolphin l., holding trident in l. hand, and with r. extending kantharos.	2	1.84
Cabinet des Médailles, Paris: wt. 1.70 gramme. Mus. Nat., Naples, Fiorelli, 3006 (fractured, more than half of the coin missing). [Pl. XIX. 6.] Wt. 1.98 gramme. [Pl. XIX. 7.] Wt. 1.70 gramme.			
METAPONTINE UNITS.			
7. Head of Athena r., in crested Corinthian helmet, wearing plain necklace, hair tied behind and falling in curls on either side of neck.	META (in field l.). Ear of barley with leaf r.; above leaf, owl r. with wings open.	6	3.57
Garrucci, civ. 18. Macdonald, Hunter Col. I. Pl. vi. 25: wt. 3.985 grammes. Berlin Cabinet, wt. 3.46 and 3.96 grammes. R. Jameson Col. [ex A. J. Evans; cf. Evans, p. 206, fig. 3], wt. 3.65 grammes. Frankfurt-a-M., Oct. 28, 1902, Sale, lot No. 322. Strozzi Sale Cat., lot 1036. [Pl. XIX. 8.] Wt. 3.53 grammes.			
8. Similar.	META (in field l.). Ear of barley with leaf r.; beneath leaf, cross-headed torch sideways.	1	3.30
Berlin Cabinet: wt. 3.55 grammes. [Pl. XIX. 9.] Wt. 3.30 grammes. The obverse very much pitted by oxidation and bad cleaning.			

Obverse.	Reverse.	No. of coins in hoard.	Av. weight of coins in fine condition.
METAPONTINE UNITS— <i>continued</i> .			
9. Similar, necklace of pearls.	Same, no symbol in field.	3	grammes. 3.68
Berlin Cabinet: wt. 3.49 grammes (somewhat worn); cf. J. Ward Col. 60, Pl. I.: wt. 3.95 grammes.			
[Pl. XIX. 10.] Wt. 3.73 grammes.			
METAPONTINE HALF-UNITS.			
10. Head of Demeter r., hair long and tied behind, wearing wreath of barley.	META (in field l.). Two ears of barley with leaf r., side by side; in field to r., above leaf, cross-headed torch upright.	2	1.94
Carelli T. N.I.V.T. clii. 9; cf. Garrucci T. civ. 22. Berlin Cabinet (ex Imhoof Col.): wt. 1.89 gramme. Frankfurt Sale, Oct. 28, 1902, lot 323 (ex Col. Berger); cf. J. Ward Col., 61: wt. 1.96 gramme.			
[Pl. XIX. 11.] Wt. 2 grammes.			
PUNIC UNIT.			
11. Head of Persephone l., wearing single drop earring, plain necklace and wreath of corn; border of dots.	Horse standing r.; in background, palm-tree; linear border.	1	3.729
[Pl. XIX. 12.] Wt. 3.729 grammes.			
PUNIC HALF-UNITS.			
12. Head of Persephone l., wearing wreath of corn, plain necklace, and earring of single drop, ringlets of hair behind; plain border.	Horse standing r.; beneath, <i>pellet</i> ; plain border.	5	1.86
Cf. Macdonald, Hunter Col. III., 72: wt. 1.90 gramme.			
[Pl. XIX. 13.] Wt. 1.66 gramme.			

SUMMARY OF COINS IN THE TARANTO HOARD.

Tarentum:	units, 94	average weight, 3.735 grammes.
"	half-units, 2	1.84 "
Metapontion:	units, 10	3.58 "
"	half-units, 2	1.94 "
Punic:	unit, 1	3.729 "
"	half-units, 5	1.78 "
Total		114

The great interest of this hoard lies in the fact that it represents the character of the local Tarentine currency at the time of its burial. It confirms most happily Mr. A. J. Evans's classification of Period X. in his masterly monograph.

The weights of the coins from this find are rather irregular. Several Tarentine units, in the same fine condition of preservation, and from the *same dies*, show a discrepancy in weight of 0.35 centigramme, the heaviest pieces weighing as much as 3.89 grammes, while others just reach 3.50 grammes. The same remark applies to the other units and to the smaller denominations. There is no doubt, however, that all the coins belong to the same standard, the larger ones representing the units and the small ones their half.

According to Mr. A. J. Evans, the highest Tarentine denomination then issued (which *he rightly* calls *stater* or *didrachm*)³ was struck on the standard of the full weight Roman victoriatus of 3.47 grammes. However, the average weight of the above coins (3.72 grammes) makes it quite impossible to accept this view.⁴

³ Cf. Evans, *op. cit.*, pp. 197 and 201. H. Dressel, in the *Berlin Cabinet Catalogue* (Beschr., iii. p. 222), describes these coins as representing the drachms of the Tarentine series before the first reduction of the didrachm standard (281 B.C.). Mr. Evans has demonstrated that this theory is impossible.

⁴ Cf. Macdonald, *op. cit.*, I. p. 79.

M. A. Sambon, in the Nervegna⁵ Sale Catalogue, describing an unusually light stater of the magistrate ΣΗΡΑΜΒΟΣ, weighing 3.35 grammes, calls it "*Octobole Attique en relation avec les monnaies lucaniennes de poids réduit.*" More recently the same author, describing, in another sale catalogue,⁶ a fine stater of the magistrate ΦΙΛΙΑΡΧΟΣ, weighing 3.63 grammes, writes, "*Cette monnaie sort brusquement du système monétaire en usage à Tarente. Son poids dépasse légèrement celui du Victoriat qui, bien que diminué à Rome, conservait à Dyrrhachium, son poids normal de 3.41. La monnaie tarentine s'approche pourtant d'avantage des monnaies Syracusaines de 4 litrae et je crois que cette monnaie a été frappée pour faciliter les rapports monétaires avec la Sicile.*"

The almost contemporaneous and very rare four litrae pieces⁷ of Syracuse (c. 215–212 B.C.), presenting on the obverse the head of Apollo, and on the reverse Nike carrying a trophy, do not exceed the maximum weight of 3.498 grammes, which is very much under the standard followed here. It is very improbable that Tarentum and Metapontion should have adopted the Syracusan or Sicilian standard in preference to one tallying with the mainland currency mostly composed then of Roman denarii of reduced weight (3.90 grammes) and of victoriati, the weight of which, since 217 B.C., had fallen to 2.92 grammes.

In my opinion it is the former standard, viz. the one of the reduced denarius, that the two above cities had

⁵ Collections Martinetti et Nervegna, Rome, November 18, 1907, p. 30, lot No. 343.

⁶ Collection de Monnaies Antiques Grande Grèce et Sicile, Paris, December 19, 1907, lot No. 25, now in M. Picard's collection.

⁷ Cf. Head, *Hist. Num.*, p. 164.

in view during their short monetary revival. No doubt, should the seven Tarentine pieces of the present class which were known to Mr. A. J. Evans, not have been of such an abnormal low weight (average 3.46 grammes), he would possibly have arrived at a similar conclusion. In fact, if we only take into account the heavier pieces from this hoard, we find that their weight averages about 3.84 grammes, while one stater in my cabinet, of the magistrate ΚΡΙΤΟΣ, but not from this hoard, weighs exactly 3.90 grammes.

The weight of the exceedingly rare half-units or drachms points to the same conclusion, one of the Tarentine pieces weighing as much as 1.98 gramme. My beautiful example of the very rare Metapontine half-unit weighs exactly 2 grammes,⁸ answering thus with sufficient approximation to the weight of the contemporary quinarius or *half-denarius* of 1.95 gramme.

It is also possible that Tarentum and Metapontion, while a part of Hannibal's army was wintering there, by adopting the above standard, which for convenience' sake we may call the *Hannibalic standard*, assimilated their coinage to the Punic one which was current among the Carthaginian troops. In fact, the Tarentine and Metapontine staters of this period tally almost exactly with the Punic drachm of Phoenician standard, which weighed 3.823 grammes.

Mr. A. J. Evans, while considering the non-Hellenic origin of the names ΣΗΡΑΜΒΟΣ and ΣΩΚΑΝΝΑΣ, suggests that Hannibal, whose fiscal needs were pressing, may have secured, as a kind of financial guarantee, the nomination of some of his officers as monetary magistrates at

* The heaviest Punic half-unit (Type No. 12) weighs 1.66 gramme.

Tarentum. I would venture to add that, considering the style, fabric, characteristics of the punctuated letters (in all cases strikingly similar),⁹ and especially the identical condition of preservation of all the coins at the time of their concealment, it is impossible to avoid the suggestion that the Metapontine,¹⁰ as well as the Punic coins, were also *engraved* and *struck* at *Tarentum*, very probably under monetary magistrates chosen by Hannibal. Should this not be admitted, there is no doubt that Tarentum and Metapontion were in close alliance during their short monetary revival, and this find confirms entirely the propriety of referring these Metapontine units or staters (cf. 7, 8, 9) to the Hannibalic period, as Mr. A. J. Evans first so happily suggested.

The Tarentine staters call for no special remark.¹¹

The ΣΩΓΕΝΗΣ drachm (Type No. 6), now for the first time published, shows that ΣΩΚΑΝΝΑΣ is not the only magistrate who struck this denomination—the rarest of the Tarentine series—and encourages the hope that the corresponding half-units or drachms of the magistrates ΣΗΡΑΜΒΟΣ, ΚΡΙΤΟΣ, and ΦΙΛΙΑΡΧΟΣ may some day come to light.

As already mentioned, the new ΣΩΓΕΝΗΣ drachm is represented in the Paris Cabinet des Médailles (*ancien fonds*) by a fine specimen from the same dies, with an obverse slightly double-struck. Strange to say, this valuable little coin had hitherto escaped notice, and the

⁹ The legends of Nos. 3, 4, 5, 6 of Tarentum, and Nos. 8 and 9 of Metapontion, are in punctuated characters.

¹⁰ The silver unit of Metapontion (Type No. 7), published by Mr. A. J. Evans, had also been procured at *Taranto*; cf. Evans, p. 207.

¹¹ Each type presented several varieties of dies.

fragment of this same type in the Naples Collection was in too poor condition to be correctly described.¹²

In order to complete the series of all the known Tarentine silver coins of this period, a reproduction of two examples of the ΣΩKANNAΣ drachm from my cabinet is given on Pl. XIX. 7a and 7b, the second being from unpublished dies.

This type, not represented in the find, is also of the highest rarity, and the following four examples only are known to me:—

- (a) With ΣΩKAN
NAΣ beneath horse on obverse. Wt. 1.70 gramme. Evans Type F, 1, Pl. x. 14. Brit. Mus. Cat. App. 3; Sambon, *Mon. de la Presqu'île Italique*, Pl. xviii. 26.
- (b) From same dies. Wt. 1.694 gramme (somewhat damaged by oxidation). [Pl. XIX. 7a.]
- (c) Type smaller. Beneath horse, ΣΩKA
NNAΣ Modena Cabinet. Wt. 1.70 gramme.
- (d) From same dies (formerly in the Nervegna Col., lot 348). Wt. 1.70 gramme. [Pl. XIX. 7b.]

The Metapontine portion of the hoard deserves more careful analysis.

The six very scarce staters (Type No. 7) present several varied dies, but did not include the one engraved by Mr. A. J. Evans (*op. cit.*, p. 206), of very late style and small module, a specimen of which, in the Berlin Cabinet, weighs 3.96 grammes.

The example reproduced on Pl. XIX. 8 is of unusually

¹² Fiorelli describes thus No. 2006: "TAPA Taras nudo cavalcando il delfino a sin. R. Cavaliere nudo sul cavallo stante a d. - - ΠΕ - ΗΣ, manca metà della moneta. Ar. 15."

fine style for the period, and though well spread and in brilliant condition, weighs only 3.53 grammes.

Not being too well acquainted with the Metapontine series, I don't know if Nos. 8 and 9 are unpublished. They are, however, of extreme rarity, and not to be found in the British Museum (Italy), Naples, Santangelo, or other catalogues to hand, though both are represented in the Berlin Cabinet.¹³

The presence in this hoard of the two exceedingly rare Metapontine small coins (Type No. 10) is conclusive, and enables me to refer these charming (though of late style) little pieces to the same period, and to recognize for the first time in their denomination¹⁴ a drachm or half-unit of the *Hannibalic* standard.

The Punic unit, represented in this find by a single example, is of a peculiar late style. The head of Persephone bears a strange resemblance to the nymph Satyra of the latest Campano-Tarentine issue.

The presence of a pellet beneath the horse, on the Punic half-units, may be here the mark of value of the drachm, and thus emphasizes the fact that in the present issue the larger coin was intended to pass for a *Hannibalic didrachm*, or stater, though its weight, as I have shown above, almost exactly tallies with that of the Punic *drachm* of Phoenician standard.

¹³ Dr. K. Regling has been kind enough to supply me with casts of the silver Metapontine coins of this period in the Berlin Cabinet, and I tender him here my sincere thanks.

¹⁴ This type hitherto had been named "triobol" (?), a wholly unknown or at any rate abnormal division at Metapontion, whose regular coinage of full-weight staters (7.90 grammes) appears to have ceased after the capture of the town by the Lucanians shortly before 300 B.C. Mr. G. F. Hill, however, in his catalogue of the J. Ward Collection, describes a somewhat similar coin as an italic quarter-stater (No. 61, p. 10), and rightly dates it after 300 B.C.

As all the coins were comparatively fresh from the mint when withdrawn from circulation, we shall not be far wrong in fixing the approximate date of 210 B.C. for the deposit of this interesting little hoard. It was doubtless at some time of sudden surprise, in those stirring days, that the owner of this *tesoretto* had to hide it where it was to remain so long undisturbed.

MICHAEL P. VLASTO.

P.S.—Since writing the above, and after this paper was already in type, Cav. Aurelio Belleni of Taranto has given, in the *Bullettino Italiano di Numismatica* (Mai, 1909), an excellent short account of this hoard. My own conclusions mostly coincide with those expressed by Cav. Belleni, although I somewhat differ from him as to the character of the standard adopted.

XI.

A SYNOPSIS OF THE COINS OF ANTIGONUS I AND DEMETRIUS POLIORCETES.

(See Plate XX.)

AMONG the generals who at the death of Alexander the Great succeeded to his vast empire, there is one of whom numismatics tell us very little, namely, Antigonus. Yet he was at one time the most powerful of all the Diadochi. He also was the first to assume the royal title and the diadem.

Up to the present time it would seem that no coins have been published which can be said, with any certainty, to have been struck by Antigonus himself in his "kingdom of Asia." There are, of course, the issues of gold and silver coins with the name and types of Alexander the Great, which are attributed to Asiatic mints and to the earlier part of the reign of Antigonus.¹ But the chronological arrangement of such coins must always remain a matter of conjecture. Besides these there are a few very rare pieces—gold staters and silver tetradrachms—with the types of Alexander, but with the inscription ANTIGONΟΥ ΒΑΣΙΛΕΩΣ. It is, however, generally acknowledged that these coins (of which more below) were not struck by Antigonus, but by his son

¹ Cf. *Historia Numorum*, p. 201.

Demetrius, in the Peloponnese, probably in the year 303 B.C.²

Now, however, we have a tetradrachm which can be said with a considerable amount of certainty to have been struck not only by Antigonus himself, but also within his Asiatic dominions, and before the year 306 B.C.

1. *Obv.*—Head of beardless Heracles to r., wearing lion's skin.

Rev.—Zeus Aëtophoros seated l. on throne without back; in field l., trident head; behind figure, ANTIGONOS; below throne, A

R. Tetradrachm. [Pl. XX. 1.]

The types are those of the ordinary tetradrachms of Alexander, while the style is strongly reminiscent of those usually assigned to Damascus and other Syrian mints. The retrograde N's, like the whole style of the coin, betray a foreign origin.

It will be remembered that in the year 306 B.C., after the great naval victory of Demetrius off Salamis in Cyprus, Antigonus assumed the title of "king," conferring it at the same time upon his son. It is therefore to be assumed that this coin, lacking the regal title, was struck before 306 B.C. It may also be remembered that in the preceding year, 307 B.C., Antigonus, being ambitious of the throne of Asia, founded the city of Antigoneia on the Orontes in Syria, intending it to be the capital of his empire. Under these circumstances it is tempting to suggest that our coin, which has a large A under the throne, may have been struck at Antigoneia on the Orontes, about 307 B.C.

² Cf. *ibid.*

Probably nearly contemporary with this piece is a tetradrachm preserved in the Cabinet des Médailles,² Paris, which may be described as follows:—

2. *Obv.*—Head of Heracles as before.

Rev.—Zeus seated as before on throne with back; in field L., club and E; behind figure, ΔΗΜΗΤΡΙΟΥ

R. Tetradrachm. [Pl. XX. 2.]

This coin also lacks the regal title, and its fabric suggests an Asiatic origin. It was probably struck before 306 B.C. by Demetrius, who was then in command of a large fleet off the coasts of Cilicia and Cyprus.

Antigonus, following up his ambitious policy, sent his son Demetrius, in the year 307 B.C., with a fleet to Greece, to wrest it from Ptolemy and Cassander. At Athens, where he spent the winter, Demetrius was received with the greatest enthusiasm. He was called *ὁ Σωτήρ*, "the Preserver," and his name was ranked among the tutelary divinities of Athens, as Plutarch and Diodorus tell us.

When next Demetrius visited Athens, in 304 B.C., he came as an even greater and more powerful personage than before. He was the victor of Salamis, was called "king," and surnamed "Poliorcetes," having just returned from his famous siege of Rhodes. The winter he again spent at Athens, but in the spring he set about reducing the fortresses which were still held for Ptolemy and Cassander in the Peloponnese. Sicyon, Corinth, Argos, and many small towns in Arcadia and Achaia

² *Mionnet*, vol. i. p. 578, No. 829. There is a variety of this coin in the collection of Monsieur B. Yakountchikov, in St. Petersburg.

fell into his hands. A general assembly was held at Corinth, and Demetrius was proclaimed Commander-in-chief of all Greece. The winter of 303 B.C. he again spent at Athens.

Between the time of his landing in Greece in 304 B.C. and his departure for Asia in the spring of 301 B.C. we may place the following coins:—

3. Gold stater with the name and types of Alexander the Great; but on the *obverse* the helmeted head *unmistakably has the features of Demetrius Poliorcetes* (compare features of No. 9 on the same plate).

Rev.—Nike to l., holding wreath in r. hand and *trident* (instead of trophy-stand) in l.; in field to l., *aplustre*; to r., ΑΛΕΞΑΝΔ(ΡΟΥ).

N. Stater. [Pl. XX. 3.]

E. J. Seltman Coll.

4. Stater with types of Alexander.

Obv.—Head of Pallas.

Rev.—Nike precisely as on last coin, with wreath and *trident*; in field to r. and l., Ε and Ξ; to l., ΒΑΣΙΛΕΩΣ; to r., ΔΗΜΗΤΡΙΟΥ.

N. Stater. [Pl. XX. 4.]

Brit. Mus. Coll.

5. Stater.

Obv.—As before,

Rev.—Nike to l., holding wreath in r. and sceptre in l. hand; to r., ΒΑΣΙΛΕΩΣ; to l., ΔΗΜΗΤΡΙΟΥ; below monogram, ΑΝΤΙΓ (Antigonus?).

N. Stater.

Brit. Mus. Coll.

Formerly in the Montagu Collection; cf. 1st part, lot 245, and Pl. iv.

6. Stater.

Obv.—Alexander's types as before, the head of Pallas of remarkably fine style.

Rev.—Nike to l., holding trophy-stand in l. and *aplustre* in r. hand. In field below, wreath; to l., ΒΑΣΙΛΕΩΣ ΑΝΤΙΓΟΝΟΥ

N. Stater. [Pl. XX. 5.]

In the Brit. Mus. Collection. Examples are also preserved in the Paris⁴ and Hunter Collections.

7. Tetradrachm with Alexander's types.

Obv.—Head of Heracles.

Rev.—Zeus Aëtrophoros seated to l.; in field, ☉; to r., ΒΑΣΙΛΕΩΣ; to l., ΑΝΤΙΓΟΝΟΥ *R.* Tetradrachm. [Pl. XX. 6.]

In the Brit. Mus. Collection. Published in *Historia Numorum* and in *Coins of the Ancients*.

With regard to the types mentioned above, the presence of the trident on the first two coins, Nos. 3 and 4, and of the *aplustre* on No. 3 and No. 6, shows that No. 3, like Nos. 4 and 6, must have been struck by Demetrius. The trident and *aplustre*, of course, refer to his naval victory over Ptolemy. The head on No. 3 undoubtedly has the features of Demetrius, as is seen by comparing it with No. 9 on the plate. It is not suggested that Demetrius actually posed as Pallas in the same way as Antigonus Gonatas posed as Pan,⁵ or

⁴ *Mionnet*, Suppl. iii. p. 244, No. 587, and Pl. xi. No. 1.

⁵ That the head on the tetradrachms of Antigonus Gonatas is a portrait of the king as Pan, is shown by the tetradrachm published by Dr. Imhoof-Blumer, *Monnaies Grecques*, Pl. D, No. 13, where the head has a diadem. Cf. also the unique tetradrachm in the Berlin Collection with ΒΑΣΙΛΕΩΣ ΑΝΤΙΓΟΝΟΥ in small letters round the head: see *Das Königliche Münzkabinet*, p. 119, No. 385.

the son of Philip V as Perseus.⁶ But it would appear that Pallas Athene, the principal tutelary divinity of Athens, is on our coin endowed with the features of another of the "tutelary divinities" of Athens, namely, Demetrius. For, as has been already said, Demetrius had been proclaimed a "tutelary divinity" at that city. It may also be remarked that while there would seem to be no similar representation in numismatics of a king in the guise of a female deity, a parallel case occurs of a queen with the attributes of a male deity, when Arsinoë II of Egypt assumes the horn of Zeus Ammon.⁷

Our third gold stater, No. 5, is of interest in that it bears the monogram ANTIC, which may refer to Antigonus.

The bond of affection is known to have been very strong between father and son, and it would seem that Demetrius struck coins in the Peloponnese bearing his own name, his own name with that of his father, and his father's only.

The gold stater No. 6 with the name of Antigonus is in many ways a most remarkable coin. The Nike is in style unlike, and indeed greatly superior to, any other representations of her on gold coins with the types of Alexander. She wears a long chiton and a peplos which clings to the hips. Apart from the attitude of the figure and the aplustre in her hand, this Nike is really a much more faithful representation of the famous Nike of Samothrace, put up by Demetrius to commemorate his victory of 306 B.C., than the Nike on the later tetradrachms of that king. Dr. Head has already suggested that the type

⁶ See *Num. Chron.*, 1896, "A Portrait of Perseus of Macedon."

⁷ See *Journal International d'Archéologie Numismatique*, vol. ii. 1899, Pls. H-IA.

with the aplustre in the hand of Nike "was intended to commemorate the naval victory off Salamis."⁸ But it would seem that the Nike is almost a copy of the famous statue in the Louvre. It would appear, too, that this is the only instance of a Nike on a stater with Alexander's types thus treated. The head of Pallas on the obverse is of most beautiful style. It surpasses any of Alexander's gold staters in artistic merit, recalling by its strength and breadth a beautiful work of sculpture truly remarkable for the period.

The style of the tetradrachm No. 7, as Dr. Head points out in *Coins of the Ancients*,⁹ closely resembles that of the almost contemporary pieces struck in the Peloponnese with little Victories on the back of the throne.

In the year 301 B.C. Demetrius was called away suddenly by his father Antigonus, who was hard pressed by Lysimachus and Seleucus in Asia. At the battle of Ipsus Antigonus was killed. Demetrius was still at the head of a strong fleet, but his power and prestige had suffered a blow. For the next few years he played no prominent part in the history of the times. In 297 B.C., however, he re-appeared in Europe, and proceeded to wrest Athens and other important positions in Greece from the hands of Cassander.

By a sudden and unexpected turn of events Demetrius, in 294 B.C., found himself in possession of a kingdom in Europe. Having been called upon by one of the sons of Cassander to help him against his brother, Demetrius managed to seize the throne of Macedon for himself, and was acknowledged by the army as king.

⁸ *Num. Chron.*, 1900, p. 7.

⁹ *Coins of the Ancients*, p. 62.

Between the years 294 and 287 B.C. (or perhaps rather between 297 and 287 B.C.), Demetrius appears to have issued coins of the following types:—

First Series (without Portrait).

8. *Obv.*—Nike blowing trumpet held in r. hand, and holding trophy-stand in l., standing upon prow to l.
Rev.—ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ Pallas Promachos to l. with shield and spear.
N. Stater. [Pl. XX. 7.] Berlin Coll.¹⁶
9. *Obv.*—As last.
Rev.—Inscription as before; Poseidon to l., wielding trident, chlamys wrapped around his l. arm (in field, different symbols and monograms).
R. Tetradrachms, drachms, and half-drachms. [Pl. XX. 8.] Brit. Mus. Coll.
10. *Obv.*—Bearded head of Zeus.
Rev.—Pallas Promachos as on the gold stater. Æ.

Second Series (with Portrait).

11. *Obv.*—Head of Demetrius to r., diademed, with horn.
Rev.—ΒΑΣΙΛΕΩΣ ΔΗΜΗΤΡΙΟΥ Armed Macedonian horseman with spear, galloping to r. on saddled horse (in field, different monograms).
N. Stater. [Pl. XX. 9.] Brit. Mus. Coll.
12. *Obv.*—Head as before.
Rev.—Inscription as before; Poseidon to l. resting r. foot on rock, leaning with l. hand on trident (in field, different symbols and monograms).
R. Tetradrachms, drachms, and half-drachms. [Pl. XX. 10.] Brit. Mus. Coll.

¹⁶ Specimens also exist in the Florence Collection, and in the Paris Collection (see *Mionnet*, vol. i. p. 577, No. 826).

13. *Obv.*—Head as before.

Rev.—Inscription as before; Poseidon as on No. 9.

R. Drachms and half-drachms.

14. *Obv.*—Head as before.

Rev.—Inscription as before; Poseidon with himation around hips, seated l. on rock, holding aplustre and trident (different monograms in field).

R. Tetradrachm.¹¹

15. *Obv.*—Head of Demetrius with short hair, wearing crested Corinthian helmet.

Rev.—Prow of ship to r. between aplustre and axe; inscription, ΒΑΣΙ ΔΗΜΗ ΑΕ.

[Pl. XX. 11, *obv.*]

This little copper coin is of interest as it bears indirectly on the gold stater, Pl. XX. 3, mentioned above, for it gives us a portrait of Demetrius wearing a helmet. The head has hitherto been described as that of Pallas, but a glance at this coin and the tetradrachm No. 10 on the plate, will show that it undoubtedly is Demetrius. The short hair alone is sufficient proof that it is a male head. Mr. Wroth, of the British Museum, is also of opinion that it may be intended for a portrait of the king.

In the year 287 B.C. Demetrius was forced to flee from Pyrrhus and Lysimachus, who had combined against him. In the following year he took refuge with Seleucus, and died in 283 B.C.

The results of the foregoing attempt at a chronological arrangement of the coin-issues of Antigonus and Demetrius Poliorcetes may be summarized thus:—

¹¹ This coin is of coarser fabric than any of the other types, and was probably struck in the upper Macedonian districts.

A. Before 306 B.C. Issued probably in Asia.

- (i.) Gold and silver, with Alexander's types and name.
- (ii.) Tetradrachms with Alexander's types inscribed
ΑΝΤΙΓΟΝΟΥ and ΔΗΜΗΤΡΙΟΥ.

B. 304 to 301 B.C. Issued probably in the Peloponnese.

- (i.) Gold, with Alexander's types inscribed, ΑΛΕΞΑΝΔΡΟΥ,
ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ, ΒΑΣΙΛΕΥΣ ΑΝΤΙΓΟΝΟΥ.
- (ii.) Tetradrachms with Alexander's types inscribed,
ΒΑΣΙΛΕΥΣ ΑΝΤΙΓΟΝΟΥ.

C. 297 (or 294) to 287 B.C. Issued probably in the Macedonian kingdom and dependencies of Demetrius.

- (i.) Gold, silver, and copper, without portrait; reverse type, Poseidon or Pallas; inscription, ΒΑΣΙΛΕΥΣ ΔΗΜΗΤΡΙΟΥ.
- (ii.) Gold, silver, and copper, with portrait; reverse types, horseman, Poseidon, and prow; inscription, as before.

In concluding, I wish to express my obligation to the Keepers of Coins at the British Museum, the Bibliothèque Nationale, and the Berlin and Florence Museums, for casts of various rare and interesting coins, some of which have not, to my knowledge, been depicted before.

CHARLES T. SELTMAN.

P.S.—Monsieur B. Yakountchikov of St. Petersburg published in 1908, along with other rare coins in his collection, a tetradrachm of Demetrius Poliorcetes with the types of our coin Pl. XX. 10, with the addition of the aegis of Pallas at the king's neck. This, again, may have been prompted by his fondness for a favourite divinity.

C. T. S.

XII.

THE ALEXANDRIAN COINAGE OF GALBA.



THE billon tetradrachms issued at Alexandria during the short reign of Galba offer several points of interest, particularly in connexion with the minor variations of the types, which appear to make possible a more exact chronological arrangement than has hitherto been attempted. The bronze issues at this time were of subsidiary importance, as they had been since the regular coinage of tetradrachms was recommenced under Claudius, and do not affect the classification of the billon.

The Alexandrian coins were always dated by the local year, which began on August 29, and the fraction of a year before that date at the commencement of an Emperor's reign was reckoned as his first year. Thus the reign of Galba fell into two Alexandrian years; and, as coins would not be struck for him at Alexandria till the news of the death of Nero on June 9, 68, arrived

there, and it took at least a fortnight, as a rule, for messages, even on such important matters as the accession of an Emperor, to reach Egypt from Rome,¹ the periods during which coins of Galba of the first and second years respectively would be struck may be taken as two months and five months.

The reverse types used on the billon coinage of this reign were five only, and will be described at once:² references to each type in the different issues will be given by the summary title. They are—

Eirene. ΕΙΡΗ ΝΗ (in first issue usually, but not always, ΕΙ ΠΗ ΝΗ). Bust of Eirene r., crowned with olive, wearing veil and chiton; caduceus behind shoulder.

Eleutheria. ΕΛΕΥΘΕΡΙΑ Eleutheria standing to front, head l., wearing long chiton and peplos, the latter gathered over l. arm; in r. hand, wreath; in l., sceptre; l. elbow resting on short column.

Kratesis. ΚΡΑΤΗΣΙΣ Kratesis standing to front, head l., wearing long chiton and peplos; on r. hand, figure of Nike r. bearing wreath; in l., trophy of helmet and cuirass on long staff.

Roma. ΡΩΜΗ Bust of Roma r., wearing crested helmet and cuirass; in front of r. shoulder, spear transversely; behind l., shield.

Alexandria. ΑΛΕΞΑΝΔΡΕΙΑ Bust of Alexandria r., wearing cap of elephant-skin and chlamys buckled over r. shoulder.

The first coin I have to mention falls outside the ordinary issues.

¹ This point is fully discussed in Willeken, *Griechische Ostraka*, i. pp. 799 ff. As he notes, the accession of Galba was certainly known in Alexandria by July 6, 68.

² In the descriptions the legend is to be read as commencing on the left and going round the margin of the coin.

Obv. type.—ΛΟΥΚΑΙΒΣΟΝΑΠΓΑΛΒΑΚΑΙΣΣΕΒ AV Head of Galba r., laur.; before neck, ις.

(1) Eleutheria.

This coin, which is figured on p. 274, and of which I have only seen one specimen, is quite distinct in the treatment of the obverse from any of the other Alexandrian coins of Galba. The head bears no resemblance to the regular portraits of him on the issues of this mint, and I do not know of any parallel to it in the imperial series. It is of good workmanship, decidedly superior in this respect to the average products of Alexandria at this period. Presumably it was struck as soon as the news of the accession of Galba reached Egypt, and before the die-engraver had any authentic portrait of him to copy. A similar instance of the invention of the "likeness" of an Emperor may be found in the earliest Alexandrian issues of Vespasian.² The legend is also differently arranged to that on the other Alexandrian coins of Galba, on which it ends in front of the neck, while in this case the last two letters are separately placed under the head.

Obv. type.—ΛΟΥΚΑΙΒΣΟΝΑΠΓΑΛΒΑΚΑΙΣΣΕΒΑΥΤ Head of Galba r., laur.; before neck, ις.

First Issue.

- (2) Eirene. ⁴(M. 255. F. 740. B. 190. D. 302. H. 125.)
- (3) Eleutheria. (M. 256. F. 741. B. 192. D. 306. H. 126.)
- (4) Kratesis. (M. 257. F. 742. B. 194. D. 311. H. 127.)
- (5) Roma. (M. 259. F. 744. B. 197. D. 314. H. 128.)
- (6) Alexandria. (M. 254. F. 739. B. 199. D. 298. H. 129.)

² Cf. *British Museum Catalogue: Alexandria*, p. xxxvii.

⁴ The references given are, M., Mionnet; F., Fœnandent, *Collection G. di Demetrio*; B., *British Museum Catalogue*; D., Dattari, *Numi Alexandrini*; H., Macdonald, *Catalogue of Coins in the Hunterian Collection*. Where a reference is italicized, the description should be corrected.

There is a good deal of variation in the ending of the legend on the obverse of this issue, specimens of all five types occurring with the omission of the final τ , and occasionally of the ν as well. The workmanship of the majority of the coins is careless, and the omissions are apparently due, wherever they occur, to the fact that the engraver had not allowed sufficient space to get in all the letters: in some instances he has endeavoured to crowd them in, and has got the last letter mixed up with the neck of the Emperor. The legend appears in full as given above where there is room for it, and I do not think that any distinction of issue can be founded on the variations.

Second Issue.

Obv. type.—ΛΟΥΚΑΙΒΣΟΝΑΓΓΑΛΒΑΣΕΒΑΥΤ Head of Galba
r., laur.; before neck, ¹².

- (7) Eirene.
- (8) Eleutheria.
- (9) Kratesis.
- (10) Roma.
- (11) Alexandria.

The distinguishing point in the obverse legend of this issue—the omission of the title ΚΑΙΣ—seems to have been overlooked in previous descriptions of the coins. Signor Dattari has catalogued specimens of (7) and (8) under Nos. 303 and 308 of his *Numi Augg. Alexandrini*, giving the legend as in the first issue; but, from impressions of the coins with which he has kindly supplied me, it is clear that this is an oversight. Similarly the description of No. 133 in the Hunterian Catalogue, which is an example of (9), requires correction, as Dr. Macdonald has verified in answer to my inquiries. And M. Svoronos informs me that Fenardent's No. 746, now

in the Demetrio Collection at Athens, should be read as (11).

The only specimen of (7) of which I know is Signor Dattari's. Of (8), in addition to his, there are examples in the British Museum and Bodleian Collections (both from the Umm-el-Atl find)⁵ and in my own. The Hunter coin is the only representative of (9) which I have noted. I possess an example of (10). There are specimens of (11) in the Bodleian and at Toronto, as well as that at Athens mentioned above.

This issue was probably the earliest of the second year of Galba. The obverse legend is very similar to that of the first year, with which it agrees in the use of the incorrect Lucius Livius instead of the correct praenomen Servius, which is found on the great majority of the coins of the second year; and the absence of any symbol in the field of the reverse also connects this with the issues of the first rather than of the second year.

Coins of this issue are comparatively very rare: possibly the error in the name of the Emperor was discovered immediately after the beginning of the year, and the legend thereupon revised; or the omission of the title ΚΑΙΣ may have been the reason which led to the stoppage of their circulation.

A coin which does not conform to the ordinary types of the second year is the following:—

Obv. type.—ΛΟΥΚΑΙΒΞΟΝΑΠΓΑΛΒΑΚΑΙΣΣΕΒΑΥ Head of Galba r., laur.; before neck, ☾

(12) Eleutheria: in field to l., star.

Here there is the full legend of the first year, but with

⁵ For a general description of the Umm-el-Atl hoard, see Grenfell, Hunt, and Hogarth, *Fayum Towns*, p. 65.

the date, LX , on the obverse; and on the reverse a symbol in the field, as on the later coins of the second year. It may be suggested that this coin, which came from the great hoard of Umm-el-Atl, and is now in the Bodleian Collection, is practically a mule: an old obverse die of the first year, with the date altered, was used with one of the new reverse dies of the second year. Such an alteration of a date is found on other coins in the Alexandrian series: a good instance is in the earliest issue of Hadrian, where the reverse type is a standing figure of Tyche with date LX . On some examples this date has clearly been altered from LX ; that is, old dies of the twentieth (and last) year of Trajan were modified for use under Hadrian, whose accession on August 11, 117, would barely be known at Alexandria before his second year according to the local reckoning had begun on August 29. Or possibly the engraver of the die may have cut the old legend to which he was accustomed, in a moment of forgetfulness: the clearest example of this which I have found in the issues of the Alexandrian mint belongs to the fourth century. I have a coin, of the posthumous type struck for Constantine the Great (Cohen, No. 716), with the usual veiled head of Constantine, but instead of the appropriate legend $\text{DVCONSTANTINVSPTAVGG}$, the engraver has put $\text{DNCONSTANTIVSPFAVG}$, as on the coins with the head of the reigning Emperor Constantius II.

Third Issue.

Obv. type.— $\Sigma\text{EPOVIG}\Lambda\text{BAAVTOKAI}\Sigma\text{EBA}$ Head of Galba
r., laur.; before neck, LX .

- (13) Eirene: in field to r., star. (F. 749. B. 191. D. 304. H. 131.)
- (14) Eleutheria: in field to l., star. (F. 755. D. 309. H. 132.)
- (15) Kratesis: " " " (F. 751. B. 196. D. 312.)
- (16) Roma: " r. " (F. 748. B. 198. D. 316.)
- (17) Alexandria: " " " (M. 264. F. 747. H. 135.)

A variety of (17) may be described as—

- (17A) Similar to (17), but with reverse legend ΑΑΛΕΞΑΝ
ΔΡΕΑ. (D. 300.)

The star in the field of the reverse is normally of eight points; but occasionally examples with a star of six points are found. This is presumably due merely to the caprice of the engraver. Another accidental variation is in the omission of the final Α in the obverse legend, which, as in the similar cases in the first issue, may be ascribed to bad spacing.

Obvious blunders in the date also occur. I have a specimen of (16) on which the date Է has been altered from Ը: here presumably the engraver was nodding, but corrected his mistake. At Athens there is one of (17) in which the date reads Է, as if the engraver had started to cut Է, and, discovering the error before he had completed it, left the numeral unfinished. It may be remarked that the workmanship of most of the Alexandrian coins of Galba, as of those of the later years of Nero, is distinctly hasty and poor: the years from 65 to 70 show a much lower level of art in the products of this mint than any earlier ones, and also than any later ones till the time of Commodus.

There are two coins which appear to be mules of this and the first or second issues.

- (18) *Obv.*—As third issue. *Rev.*—Roma; no symbol in field.
(19) *Obv.*— „ „ *Rev.*—Alexandria; „ „

The former coin is in the Bodleian; the latter in the National Collection at Athens.

Unless it is assumed that the engraver of the reverse die in these two instances had omitted the symbol, it

seems probable that an old reverse die was used with a new obverse one. It is not a general rule in regard to mule coins in the Alexandrian series that the obverse die is the earlier: as a matter of fact, examples to the contrary are more frequent. The use of old reverse dies for the early coins of Hadrian noted above may be taken in illustration: and another example of the same practice will be described below in connexion with the coins of Otho.

Fourth Issue.

Obv. type.—As third issue.

- | | | | |
|-------------------|-----------------|-------------|--------------------------------------|
| (20) Eirene : | in field to r., | simpulum r. | (F. 750. D. 305.) |
| (21) Eleutheria : | " l., | " | (F. 753. B. 193.
D. 310.) |
| (22) Kratesis : | " " | " | (M. 266. F. 752.
B. 195. D. 313.) |
| (23) Roma : | " r., | " | (D. 317. H. 134.) |
| (24) Alexandria : | " " | " | (M. 263. F. 745.
D. 301. H. 136.) |

Varieties of the above are—

- (21A) As 21, but simpulum turned to l.
 (24A) As 24, but reverse legend ΑΛΕΞΑΝ ΔΡΑ.

Both these varieties are described from specimens in the Bodleian.

The reason for treating the coins with a simpulum on the reverse as later than those with a star is that occasionally instances of mules of the reverse dies of this issue with obverses of Otho are found. For the Alexandrian tetradrachms of Otho the five reverse types of Galba were continued, and normally appear without any symbol in the field, as in the first and second issues of Galba; but very rare coins of Otho occur with a simpulum

on the reverse,⁶ which seem to be cases of the use of the old dies of Galba: and, as I have never seen a coin of Otho with a star on the reverse, I conclude that the *simpulum* series of Galba was his last, and after the star series. Also there is at Athens a coin with the *Eleutheria* reverse and a symbol in the field described by M. Feuardent under No. 754 as a flower. M. Svoronos informs me that he considers this symbol to be a *simpulum* turned to l. (as in 21A), engraved over a star, which also points to the *simpulum* being the later symbol.

It is possible that the change in the symbol on the reverse was made on January 1, as Signor Dattari has advanced reasons for supposing that such changes were practised by the Alexandrian mint at this period.⁷ On this assumption, however, the star series would have been issued for about four months, and the *simpulum* series for about one only, and the former should be much commoner than the latter, unless there was a sudden outburst of activity at the mint in January, 69. As a matter of fact, the output of coins at Alexandria, at any rate taken year by year, tended to diminish steadily after 66;⁸ and, as the two series are about equally common, it is more probable that the change of symbol was made about November, 68.

The comparative rarity of the different types may be roughly judged from the numbers given below, which show how many of each were included in the hoards—ten in number—comprising coins of this period which I have

⁶ *E.g.*, B. 203, D. 327 (*Eleutheria*); D. 329 (*Kratisis*). These two types are the only ones of which I have seen and possess examples with a *simpulum* on the reverse in the coinage of Otho.

⁷ *Riv. Ital. Num.*, 1903, pp. 15 ff.

⁸ For a discussion of this point, see *Fayum Towns*, p. 67.

examined. These hoards are of various dates, from about 120 to about 280 A.D.; but the difference in date would not affect the relative proportion of examples of the types belonging to the reign of Galba to any serious extent, and the combined result probably gives a fair average.

(1) 1	(10) —	(18) 2
(2) 25	(11) 1	(19) —
(3) 43	(12) 1	(20) 6
(4) 22	(13) 6	(21) 23
(5) 10	(14) 11	(21A) 1
(6) 37	(15) 4	(22) 5
(7) —	(16) 6	(23) 3
(8) 4	(17) 13	(24) 7
(9) —	(17A) —	(24A) 1

The totals of the different issues—mules being omitted—are—

First, 137	Third, 40
Second, 5	Fourth, 46

In the choice of types for the reverses of the billon coins of Galba, the authorities of the Alexandrian mint broke away from the practice of the later years of Nero to a certain extent, though not so markedly as was done in the imperial coinage at Rome. The busts of Roma and Alexandria had appeared on the issues of the thirteenth and twelfth years of Nero; but the figures of Eleutheria and Kratesis were quite new at Alexandria, although parallel personifications of Dikaioyne, Eirene, and Homonoia were in vogue in the third, fourth, fifth, and sixth years of Nero. The types of Libertas and Virtus on the Roman coins of Galba are quite distinct in treatment and attributes; and it is clear that, if the choice of the Greek equivalents of these types at Alexandria was due to directions from Rome, the Alexandrian artist

designed his figures unfettered by any Roman precedent. This fact is even more obvious in the treatment of Eirene: the Roman coins of Galba give Pax as a full-length figure, but the Alexandrian Eirene is shown in bust only; and this bust is closely studied from the bust of Hera Argeia on the coins of the last two years of Nero, the only mark of differentiation being the addition of a caduceus behind the shoulder of Eirene.

The bronze coins of Galba show a similar change of reverse types from those of Nero. The limited bronze issues of Nero, like those of Claudius before him, mainly bear types chosen from the animal world or inanimate objects, figures of divinities being very rare. The bronze types of Galba are busts of Nike, Sarapis, Isis, and Nilus, the only one of which that had appeared before being the last-named, a new device in the so-called Canopus, and a triumphal arch.

The field of choice for reverse types, both in billon and in bronze, marked out under Galba was not enlarged to any material extent until the time of Domitian, when a complete revolution in the management of the Alexandrian mint would appear to have taken place.

In conclusion, I have to thank the authorities of the British Museum and of the Bodleian Library (at the latter of which type-specimens from the Umm-el-Atl hoard are preserved), for their kindness when I have desired to inspect the collections under their charge; Signor Dattari, for allowing me freely to study his coins and answering numerous inquiries; and M. Svoronos and Dr. Macdonald, for supplying particulars and casts of coins at Athens and Glasgow.

J. G. MILNE.

XIII.

A FIND OF ENGLISH COINS AT CONSTABLE BURTON.

ON February 18 of this year, four men engaged in replanting Wild Wood, on the estate of Mr. D'Arcy Wyvill, at Constable Burton, in the North Riding of Yorkshire, dug up a large number of English coins. At the inquest on March 5, 236 coins were produced and declared treasure-trove, the coroner adding that he did not suspect that any had been withheld. In his evidence, the original finder, a stonemason named Thistlethwaite, stated that he turned up four or five coins in the soil, and at a small distance came upon a large number, of which he obtained 143; three other men, Wilson, Scott, and Tomlin, found 31, 25, and 37 respectively, most of these pieces lying at distances of a foot or two apart, and some being edgeways in the earth.

They are mostly in poor condition, and were cleaned and polished by the finders. Appended is a description of the hoard. No milled coins were found.

LIST OF COINS.

	Edward VI. Philip and Mary. Elizabeth.	Shilling (last issue). " with date (illegible) and mark of value.	MM. Tun.			
1	Edward VI.			MM. Martlet.	ELIZABETH; D'G'. ANG'. FR'. ET. HIB'. REGINA	(1551-3)
2	Philip and Mary.			"	ANG'. FR'. ET. HI'.	(1554-5)
1	Elizabeth.			"	AN'. FR'. ET. HI'.	(1558-61)
1	"			"	ANG'. FRA'. ET. HIB'.	"
2	"			"	Cross crosslet.	"
3	"			"	ANG'. FR'. ET. HIB'.	"
4	"			"	AN'. FR'. ET. HIB'.	"
1	"			"	Lis.	"
1	"			"	Bell.	(1582-4)
1	"			"	π.	"
1	"			"	Escallop.	(1584-7)
2	"			"	Crescent.	"
1	"			"	(on obverse struck over escallop.)	(1587)
1	"			"	Hand.	(1590-2)
4	"			"	Tun.	(1592-5)
2	"			"	Woolpack.	(1594-6)
2	"			"	l.	(1601-2)
2	"	Sixpence.		"	Pheon.	1561
1	"	"		"	"	1564
1	"	"		"	ANG'. FRA'. ET. HI'.	1565
1	"	"		"	"	1567
1	"	"		"	ANG'. FR'. ET. HI'.	1567
3	"	"		"	Coronet.	1567
3	"	"		"	"	1568

S	Elizabeth.	Sixpence.		MM. Coronet, ELIZABETH; D'G' ANG' FR' ET' HI' REGINA		1639
				"	"	
1	"	"	"	Illegible (coronet or castle).	"	1639
2	"	"	"	Coronet.	"	1670
1	"	"	"	Castle.	"	1671
0	"	"	"	Ermine.	"	1672
5	"	"	"	"	"	1673
3	"	"	"	Acorn.	"	1673
1	"	"	"	"	"	1673
5	"	"	"	Cinquefoil.	"	1674
2	"	"	"	"	"	1674
2	"	"	"	"	"	1675
2	"	"	"	"	"	1676
2	"	"	"	Cross.	"	1677
2	"	"	"	"	"	1679
2	"	"	"	"	"	1680
2	"	"	"	"	"	1681
1	"	"	"	Sword.	"	1682
1	"	"	"	Bell.	ELIZAB' D' G' ANG' FR' ET' HI' B' REG'.	1682
1	"	"	"	7C.	"	1683
3	"	"	"	Escallop.	"	1684
2	"	"	"	"	"	1685
2	"	"	"	"	"	1686
2	"	"	"	Hand.	"	1690
2	"	"	"	Tun.	"	1692
0	"	"	"	"	"	1693
1	"	"	"	"	"	1694
7	"	"	"	Woolpack.	"	1694
3	"	"	"	Key.	"	1694
1	"	"	"	"	"	1696
1	"	"	"	"	"	1698
1	"	"	"	2.	"	1699
	"	"	"	Coronet, ELIZABETH; D'G' ANG' FR' ET' HI' REGINA.	"	

date illeg. (1596-70)

	Elizabeth.	Sixpence.	MM. Cross.	ELIZABETH : D'G' ANG' FR' ET' HI' REGINA. date illeg.	(1577-81)
1	"	"	Ball.	ELIZAB' D'G' ANG' FR' ET' HIB' REGI'.	(1582-4)
1	"	"	" Crescent.	"	(1587-9)
1	"	"	" Hand.	"	(1590-2)
5	James I.	Shilling (EXVRGAT, &c.).	" Thistle.	IACOBVS:D'G' ANG' SCO' FRA' ET' HIB' REX	(1603-4)
4	"	"	" Lis.	"	(1604)
5	"	"	"	IACOBVS:D'G' MAG' BRIT' FRA' ET' HIB' REX	(1604-5)
5	"	"	" Rose.	"	(1605-6)
5	"	"	" Escallop.	"	(1606-7)
1	"	"	" Coronet.	"	(1607-8)
5	"	"	" Key.	"	(1609)
1	"	"	" Ball.	"	(1610)
1	"	"	" (on reverse struck over key.)	HI' REX	(1610)
1	"	"	" Ball.	"	(1611)
1	"	"	" Mullet.	"	"
1	"	"	" Thistle.	MAG:BRIT:FRA:ET:HIB:REX	(1621-3)
1	"	"	" Lis.	HI:REX	(1623-4)
9	"	"	" Illegible.	"	"
				(These have portrait which occurs on shillings issued 1605-1606.)	
9	"	Sixpence (EXVRGAT, &c.).	" Thistle.	IACOBVS:D'G' ANG' SCO' FRA' ET' HIB' REX	1604
9	"	"	" Lis.	"	1604
1	"	"	" Rose.	IACOBVS:D'G' MAG' BRIT' FRA' ET' HIB' REX	1605
1	"	"	"	"	1605
6	"	"	" Coronet.	"	1605
1	"	"	" Rose.	"	1605
1	"	"	"	"	1621
				(on reverse, SEPRAT for SEPARAT)	
9	"	"	" Lis.	MAG:BRIT:FRA:ET:HIB:REX	1623

The shilling of Edward VI, which was said at the inquest to be "in excellent state of preservation," has the bust almost entirely effaced; the same is the case with the two shillings of Philip and Mary, and nearly all the coins of Elizabeth—the effect doubtless of long circulation, assisted by the process of cleaning. Those of Charles I have been much clipped. All belong to the Tower Mint except one shilling of Charles I; this piece, which has the oval shield garnished and crowned, with EBOR below, is in very fine preservation. This fact seems to point to the owner of the hoard, perhaps a soldier, having recently come from the south of England.

The latest piece to which a date can be accurately fixed is a shilling of the year 1641 (uncertain pieces being two Tower shillings of Charles I, which must be between 1638 and 1646, and the York shilling, which is after 1629, the establishment of the York Mint, and before 1644, the date of the city's surrender to Parliament).

At the outbreak of the Civil War in July, 1642, the divided feelings of the people of Yorkshire, and the importance of their towns and ports, made them the victims of raids from both parties. In October, 1642, Sir John Hotham, who had seized Hull in July, found an excuse for calling in the Lincolnshire troops to assist him in a marauding expedition in which he took Cawood Castle. This brought the Duke of Newcastle to the relief of the Royalist party, and on December 4 he entered York. On his way we hear of him defeating Hotham at Pierce Bridge, overrunning the North Riding, and obtaining the surrender of Richmond and other towns, by which it would seem that his march to York

led him very near, if not through, Constable Burton. It was possibly this occasion or a similar inroad of troops through the North Riding that caused this hoard of coins to be so hastily thrown into the earth without a box or jar to contain them.

GEORGE C. BROOKE.

XIV.

TWO ITALIAN MEDALS OF ENGLISHMEN.

(See Plates XXI., XXII.)

MEDALLIC portraits of Englishmen by Italian artists of the Renaissance are so uncommon that there is every excuse for bringing them to the notice of readers of the *Numismatic Chronicle*. The two pieces which are illustrated in Pl. XXI. 1, 2 are, it is true, not here described for the first time. Mr. Max Rosenheim's piece was illustrated so recently as December, 1907, in the *Burlington Magazine*; ¹ the other was known to Armand. It is, however, improbable that the *Burlington Magazine* and the organ of the Royal Numismatic Society have many readers in common. As regards the description in Armand, the true identification is buried in the third volume, that trap for the unwary, and was only discovered there by us after Mr. Rosenheim had hit upon it independently. What is more, this fine medal has never, it appears, been illustrated. It seems, therefore, quite worth while to make the two pieces the subject of a note which will meet the eyes of English numismatists. For the opportunity of doing so I have to thank Mr. Rosenheim; indeed, it would be more accurate to say that I am only communicating information which is, in the first instance, due to him.

¹ Page 150, Pl. iv. 4.

1. *Medal of Sir John Cheke,*

Obv.—Bust to r., draped in antique fashion, with bulla on r. shoulder; long beard, hair short. Across the field, IOANNES CHECVS

Rev.—None.

Bronze. Cast. Diam. 54 mm.

Collection of Mr. Max Rosenheim. [Pl. XXI. 1.]

For details as to the identification of this portrait of the well-known humanist, I may refer to the article in the *Burlington Magazine* already mentioned. Here it is only necessary to repeat that the medal is obviously the work of a Paduan classicizing artist of about the middle of the sixteenth century. Now, Sir John Cheke in 1554 received a royal licence to travel abroad. He eventually reached Padua, where he took part in the work of the University, lecturing to Englishmen on Demosthenes. He returned to Strassburg, which he left early in 1556, in order to come back to England. It follows that he was in Italy in 1555, and probably he spent most of his time in Padua, since that is the only Italian city mentioned by his biographer Strype in connexion with his travels. Cheke, who was born in 1514, would be about forty-one at the time that this medal was made.

The medal is a good piece of portraiture, evidently by a sympathetic artist, although his technique, as shown in the treatment of the hair, is not of the best. The pseudo-classical element, which is seldom absent from Paduan work of the time, is confined to the dress. The casting has been well done, and the almost entire absence of chasing allows the effect of the original wax model to be seen at its best.

It is perhaps rash to give a name to the artist of this

medal, and no attempt to do so was made when it was first published in the *Burlington Magazine*. Mr. Rosenheim, however, has called my attention to the fact that there is a considerable resemblance in treatment between the medal of Cheke and one of the medals of a distinguished Paduan jurist, Marco Mantova Benavides [Pl. XXII.]. The specimen here published is in Mr. Rosenheim's own collection. If he is right in supposing that they are from the same hand, we are able to fix the authorship of Cheke's medal, for Benavides himself, in his *Analysis Variarum Quaestionum*, published at Venice in 1568,² says that his own medal was made by Martino da Bergamo. Explaining the motto, *Fessus lampada trado*, he writes: "Descendat in arenam qui vult, ego cum monstribus satis sum luctatus. In eum qui tandem quiescere cupit seque a laboribus abstinere, proque symbolo desumpsimus nos, sculpsitque a tergo imaginis meae Martinus Bergomensis egregius artifex." The reverse of his medal bears an ox lying on the ground, and the legend FESSVS LAMPADA TRADO. Armand³ remarks that Benavides, who was eighty years old in 1568, may for some years well have been thinking of repose; he therefore proposes to date the medal about 1565. Benavides, however, to judge by the portrait,⁴ may certainly be no more than seventy or even sixty-five years old; and if so, the medal belongs to the same decade as that of Cheke. For purposes of comparison, on Pl. XXI. 3 is reproduced the portrait-medal of

² The book is inaccessible to me; I quote from J. Morelli, *Notizia d'Opere di Disegno* (ed. Frizzoni, 1884), p. 73.

³ *Les Médailleurs Italiens*, vol. i. p. 248.

⁴ Armand appears not to have seen the medal itself, but only the reproduction in Mazzuchelli.

Benavides by Giov. Cavino; on this he looks about fifty years old, which would date it to about 1540.

The resemblance between the medal of Cheke and Martino da Bergamo's medal of Benavides, although obscured by the fact that the latter has been carefully chased, is undeniable. The quality of the relief is the same; both the busts have the same somewhat wooden pose; and the style of the lettering, allowing for the difference in size which makes the letters on the Cheke medal look a little thicker, is the same. A peculiarity of the medal of Cheke is the placing of the inscription horizontally—a very unusual feature in medals of this period. The fact that, on the reverse of the Benavides medal, the inscription is also placed across the field is worth noticing, although it may be a mere coincidence, due to the artist's desire to fill up the vacant space above the recumbent ox.

Why Benavides or the artist should have chosen the singularly unsuitable emblem of an ox to represent himself as a runner in the race of life, I do not know. The quotation is, of course, inspired by the famous line of Lucretius (II. 77): "Et quasi cursores vitæ lampada tradunt."

Nothing is known of Martinus Bergomensis beyond what Benavides and his medal tell us.

2. Medal of Richard White.

Obv.—Bust of White to l., bearded, bare-headed. Around, RICARDVS · VITVS · BASINSTOCHIVS · LEGVM · DOCTOR and LVO · LEO · MDLXVIII

Rev.—None.

Bronze. Cast. Diam. 61 mm.

Cabinet des Médailles, Bibliothèque Nationale, Paris.⁵ [PL XXI. 2.]

⁵ See Armand, *Les Médailleurs Italiens*, i. p. 261, No. 1, and ill. 119a.

Richard White (1539-1611),⁵ son of Henry White of Pasingstoke, was a Fellow of New College, Oxford; in 1564 his Fellowship was declared void owing to his absence. Shortly before that year he was at Louvain, whence he proceeded to Padua. At the Italian University he was created Doctor of Civil and Canon Law. His first work, *Aelia Laelia Crispis*—a treatise on a famous riddling inscription—was published at Padua in 1568 (the year in which the medal was made). On the title-page his name is given, as on the medal, in the form Ricardus Vitus Basinstochius, a form which led Armand, when he first came across the medal, to describe it under the curious name "Basinstocchi." The dedication to this book is dated "Patavii ix. Cal. Decembres 1567."

The medal was without doubt made at Padua, the home of the medallist by whom it is signed, Ludovico Leoni. It is an admirable specimen of the artist's style, and shows that his fame as a modeller of wax-portraits was not undeserved.

G. F. HILL.

⁵ See *Dict. of Nat. Biogr.*, s.n.

XV.

CLICHÉ REVERSE FOR A TOUCHPIECE OF CHARLES II BY THOMAS SIMON.



IN the second edition of Vertue's *Medals and Coins of Thomas Simon*, we find figured on Pl. xxxix. D.E., an angel with a reverse like the thin silver pattern illustrated above. The letter-press describing the piece informs us that Charles II gave a warrant to Simon on the "18th day of September in the twelveth year of our reign," i.e. 1660, commanding him to "forthwith prepare the stamps for our Angell-Golde according to the pattern herein expressed." It appears that this design agrees with the cliché here shown, whilst the obverse presented an angel of very feminine grace, differing widely from the preceding and succeeding types. Folkes and Ruding, on Pl. xiii. 12 (gold), illustrate the reverse only, and state on p. 155 and in vol. ii. p. 359 respectively, that no example is known in gold, but that a silver piece, presented by Mr. Thomas Hollis to the British Museum, proves that the die was made. It seems that Mr. Hollis

did not fulfil his intention, for the National Collection possesses no record of such a gift. Mr. Gough, in his edition of *Vertue*, seems to imply that Mr. Hollis's specimen was complete, but if so it would be curious that Folkes and Ruding should have figured the reverse alone, and it is possible that the obverse is only known from the design apparently affixed to the warrant.

My example of this very rare, perhaps unique, pattern is from the Murdoch, Montagu, and Brice Collections, and is an interesting memorial of Simon's intention of making a far more elaborate touchpiece than that afterwards in use; but we must conclude that Charles II at first used coins struck from older dies, for we are not acquainted with any ordinary angels bearing his name, and we learn from Pepys and Evelyn that he began to touch for the "king's evil" immediately after his arrival in England, and before the issue of this warrant. Pepys mentions the practice on the 23rd of June, 1660, and Evelyn describes the ceremony, including the presentation of the angel, on the 6th of July in the same year, when none of the new currency was completed.

During the latter part of the reign of Charles I the king had not always the required angel at hand, and it is said that he sometimes substituted pieces of silver or copper, and even on occasions touched the patient without presenting any gift, and that during the residence of Charles II in exile it became customary that the sick man should bring his own coin with him.¹ During the years which followed the Restoration, the belief in the royal touch became so great that it is reported² that

¹ *Archæological Journal*, 1853, vol. x. p. 197.

² *Num. Chron.*, 4th Series, Vol. VIII. p. 128.

nearly 90,800 persons resorted to this cure during his reign, and no less than 24,000² in the first four years. It is therefore not surprising that the costly angel should have been supplanted by a simpler and smaller design, and that the die, though made by Simon, should have been rejected, as it was not needed for currency.

That Simon was in the habit of striking these proofs in thin silver foil is evidenced by two other patterns in my collection of a broad and half-crown respectively of the first issue. They are much more carefully struck than the current coin, and exemplify the statement of Pepys that Simon's dies were better executed than the hammered coinage would lead us to suppose. He writes, in his *Diary* of February 18, 1660-61: "We staid, walking in the gallery, where we met with Mr. Slingsby, who showed me the stamps of the King's new coyne, which is strange to see how good they are in the stamp and bad in the money, for lack of skill to make them."

We notice that in the list⁴ drawn up by Simon of the "fourteen several original stamps by way of the Hammer," to which the above half-crown and the broad also belong, the "angel-piece" is included, the total charge amounting to £280.

HELEN FARQUHAR.

² *Num. Chron.*, New Series, Vol. XII. p. 192.

⁴ *Vertue's Medals and Coins of Thomas Simon*, ed. 1780, App. V. p. 89.

XVI.

THE COINAGE OF ASSAM.

(See Plates XXIII.—XXV.)

THE Ahom kingdom was founded in the middle of the thirteenth century, but it was not till the sixteenth century that the Ahom kings issued coins. Previous to the reign of Śuklenmung (1539-52), their currency appears to have been the rupee of the Sultans of Bengal, of which many finds have been made in Assam.

Śuklenmung was the first Ahom ruler to strike coins. The standard of about 176 grains was apparently borrowed from the India rupee; in other features his coins are characteristically Assamese. They are octagonal in shape, in conformity to a tradition that the Ahom country was octagonal. They bear legends in the Ahom language and script, and a date equivalent to 1544 A.D. On the obverse is the name of the king and the date, and on the reverse the devotional legend, "I, the king, worship Tārā" (Parvatī). [PL XXIII 1.] Since his day there has been little change in this type, except in the name of the deity or deities specially revered by the king. His coins, which are of gold and silver, are still fairly common in silver. Though Śuklenmung introduced the use of the Śāka era into his kingdom, he dated his coins by the Jovian cycle of sixty years, which had hitherto been used in Assam.

No coins appear to be known of his son Śukhāmphā, who reigned from 1552 to 1603. He was succeeded by his son Śusengphā, better known by his Hindu name Pratāpa Siṃha. On his coins he uses a third name, Svarga Nārāyaṇa, given to him on account of his wisdom. He appears to have been the first Ahom ruler to strike coins with Sanskrit legends, no coins being known of his reign with Ahom legends. His coins, which are rare, are dated Śāke 1570 (1648 A.D.). [Pl. XXIII. 7.] This date is of importance, as showing that the year of the death of Pratāpa Siṃha cannot be 1641, as given by Mr. Gait, in his *History of Assam*, following the native chronicles. As Mr. Vincent Smith has pointed out, the date 1649, originally given by Mr. Gait, in his *Report on the Progress of Historical Research in Assam*, on the authority of the historian Kāśināth, must be the correct one.

No coins are known of Śusengphā's sons Śurāmphā and Sutyimphā, nor of his grandson Jayadhvaja Siṃha.

Towards the close of the reign of Jayadhvaja (1649-63) took place the Muhammadan invasion under Mir Jumlah, Nawab of Bengal, which was concluded by a treaty in favour of the Moghul army after much suffering on both sides. The author of the *Fathiyah-i-Ibriyah*, who accompanied Mir Jumlah, gives an interesting account of Assam in 1662. He mentions that gold and silver were coined, but not copper, its place being taken by cowries.¹

Jayadhvaja was followed by the king whose Ahom name was Supungmung (1663-70), and who assumed the Hindu title of Cakradhvaja Siṃha on ascending the throne in 1663. The only coins known of his reign appear to be

¹ Blochmann, *J. A. S. B.*, 1872, p. 78.

those with Sanskrit legends dated Śāke 1585 (1663 A.D.) [Pl. XXIII. 8]. There is a specimen in the British Museum, and there were others in the White King and Guthrie Collections. The British Museum also possesses two gold and one silver coin of his brother Udayaditya (1670-73 A.D.). These coins bear Ahom legends, and give his Ahom name Śunyatphā. They also bear a date equivalent to 1670 A.D., the year of his accession [Pl. XXIII. 2]. No coins appear to be known of his reign with Sanskrit legends. Udayaditya was murdered in 1673 A.D. by his brother Ramdhvaja Siṃha, who reigned two years, though no coins of his reign are known.

Five kings successively occupied the throne during the troubled years 1675-81 A.D., but of them only one coin is known. This is an Ahom coin of Śubung, son of Udayaditya, who was placed on the throne after the fratricide Ramdhvaja had been poisoned. He is said to have reigned only twenty-one days.² This coin is dated in the twenty-seventh year of the cycle, that is 1675 A.D. [Pl. XXIII. 3].

A more prosperous era dawned on the accession of Śupātphā, who assumed the Hindu name of Gadādhara Siṃha. Silver coins of his reign with Ahom legends are still fairly common. They bear a date equivalent to 1681 A.D., the year of his accession [Pl. XXIII. 4]. After a prosperous reign of fifteen years, Gadādhara Siṃha died in 1696, and was succeeded by his son Rudra Siṃha, who took also the Ahom name of Śukhrungphā.

It is not till the time of Rudra Siṃha that we have a regular yearly coinage. Previous kings had been content with one issue in their reign, usually at the coronation for ceremonial purposes, and it is doubtful if their coins

² Galt, *History of Assam*, p. 154.

circulated widely. Rudra Simha struck coins in gold and silver, and introduced half- and quarter-rupees [Pl. XXIII. 9, 11, 12]. Mr. Gait, in his *Report*, p. 3, mentions a coin of Rudra Simha, 1694 A.D. (Ś. 1616). This must be due to a misreading, as Rudra Simha did not come to the throne till 1696. The half-rupee is undated, while the reverse of the quarter-rupee is occupied by the date. All his known coins bear legends in Sanskrit, and he appears to have struck none with Ahom legends. Rudra Simha was one of the greatest of Ahom kings, and though much of his reign was occupied with wars with the neighbouring states of Kachari and Jaintia, he found time to do much for the welfare of his people. He established schools and imported instructors in various arts from Bengal, and encouraged intercourse with the adjoining countries; before his time the Assamese had been as seclusive as the Tibetans still are. He transferred the capital from Garhgaon to Rangpur, where a new city and palace of brick were erected under the direction of a Bengali architect. He abolished the barbaric custom of slaying a man at the coronation, substituting a buffalo in place of the human victim.³ It may be due to the ascendancy of Hindu influence that no Ahom coins were issued by himself or his son Śiva Simha, who succeeded him in 1714.

On his accession Śiva Simha assumed the Ahom name of Śutānpā. He issued an extensive coinage in gold and silver with Sanskrit legends [Pl. XXIII. 10, 13], but appears to have struck none with Ahom legends. He was not a man like his father, and his superstitious nature placed him completely under the power of

³ Gait, *History of Assam*, pp. 175, 176.

Brahmins and astrologers. He was much perturbed by their prophecies that his rule would be a short one, and adopted all manner of devices to avoid the decree of the Fates. He is said to have declared his wife Phuleśvari "king," and to have handed over to her the royal insignia with the right to strike coins. Mr. Gait, in his *History of Assam* (p. 178) and in his *Report* (p. 3), states that the coins confirm this. They certainly do in so far as they show that Śiva Siṃha's queens issued coins. The British Museum, however, possesses coins of Śiva Siṃha alone, of dates subsequent to 1721 A.D. (Ś. 1648), which were apparently unknown to Mr. Gait. These coins, dated Śake 1644, 1645, 1654, 1659, 1660, and 1661, show that Śiva Siṃha struck coins practically throughout his reign, so that his abdication was more nominal than real. The coins of his queens bear his name as well as that of the queen [Pl. XXIII. 14-16, and Pl. XXIV. 1-7].

Phuleśvari died in 1731 A.D., and Śiva Siṃha married her sister, Ambikā Devī. She also struck coins similar in phraseology to those of Phuleśvari or, as she was called after Ś. 1648, Pramathēśvari [Pl. XXIII. 15]. On her death Śiva Siṃha chose Sarveśvari as her successor as "chief king." According to Mr. Gait (*History*, p. 178), Ambikā Devī died in 1741 A.D., but this does not agree with the coins. Coins of Ambikā Devī are dated Ś. 1654, 1655, 1656, 1657, 1658 (1732-36 A.D.). The earliest coin of Sarveśvari is dated Ś. 1661, i.e. 1739 A.D. It would appear, then, that Mr. Gait's date for the death of Ambikā is at least two years too late, and ought to be placed between 1736 and 1739—probably in 1738 A.D.—as Sarveśvari would strike coins very soon after becoming queen.

Of special interest are the coins of Śiva Siṃha and Pramathēśvari, with Persian legends, struck at Garhgaon

in the year 1651 Śāke (1729 A.D.). These coins, which are square, mark the first deviation from the orthodox octagonal shape which had hitherto characterized Asamese coins [Pl. XXIV. 1]. They are known only from a find of 143 specimens which was made near Garhgaon in 1903 (*J. A. S. B.*, 1904, *Num. Suppl.*, p. 114). This issue shows the great Indian influence that prevailed at the court of Śiva Siṃha. Śiva Siṃha died in 1744 A.D., of which year we still possess coins. From his reign dates the gradual decline of the Ahom kingdom.

He was succeeded by his brother Pramatta Siṃha,* who assumed the Ahom title Śunengphā at his coronation. The British Museum possesses a coin with Ahom legends struck in 1744, the year of his accession [Pl. XXIII. 5]. Śiva Siṃha had been a zealous convert to Hinduism, and struck no Ahom coins. It is possible that we have in this revival of the Ahom language a slight reaction against Hinduism. Pramatta Siṃha, however, only struck Ahom coins for the ceremonial distribution at his coronation. In his subsequent years he used Sanskrit legends. Coins are known in silver of each year of his reign, but the gold is rare [Pl. XXIV. 8-10].

On his death in 1751, after a peaceful reign, he was succeeded by his brother Rājeśvara Siṃha, whose Ahom title was Śurānpā, as the gold muhur struck on his coronation testifies [Pl. XXIII. 6]. This was the last occasion on which the Ahom language was used on coins. The use of the native language had so far survived the advance of Hinduism as to be retained

* Called Pramata Siṃha by Mr. Gait, and Pramatha Siṃha by Mr. Vincent A. Smith (*Cat. of Coins in the Indian Museum*, vol. i, p. 302). The name on the coins is Pramatta Siṃha.

on the money struck for distribution at the coronation ceremony, but henceforth even on that we have Sanskrit legends. Rājeśvara Siṃha struck an extensive series of coins in gold and silver [Pl. XXIV. 12–15]. Every year of his reign is represented. He introduced the smaller denominations of one-eighth and one-sixteenth muhur and rupee. He struck coins at Rangpur with Persian legends in Ś. 1674 and Ś. 1685, the former issue being square [Pl. XXIV. 11] and the latter octagonal.

Rājeśvara Siṃha was succeeded, on his death in 1769, by his brother Lakshmī Siṃha, the youngest son of Rudra Siṃha. Lakshmī Siṃha's claim to the throne was not allowed to pass unchallenged. In October, 1769, he was seized by rebels headed by a Morān named Rāgha, and imprisoned. Rāmakānta, the son of a Morān chief, was proclaimed king in his stead, though the real power lay in the hands of Rāgha. Rāmakānta struck coins dated Ś. 1691 (1769 A.D.) (Gait, *History*, p. 186), but none appear to be known at the present day. After Rāmakānta had ruled a few months, it was decided to do away with Lakshmī Siṃha. His supporters, however, suddenly arose and overthrew Rāmakānta, and in April, 1770, slew Rāgha. Rāmakānta escaped, but was soon afterwards put to death, after a reign of seven months.⁵ Lakshmī Siṃha was now installed as king with great ceremony in 1770 A.D. (Śāke 1692). Among the coins he struck in the first year of his reign was a small square gold quarter-muhur [Pl. XXIV. 17]. He struck coins [Pl. XXIV. 16–20] in each year of his reign till Śāke 1702 (1790 A.D.), when he died. His reign was a troubled one, and was marked by a brief reaction in favour of the

⁵ Gait, *History of Assam*, p. 187.

Ahom priests, who attributed the misfortunes of the country to the prevalence of Hindu beliefs.

Lakshmī Siṃha died in December, 1780 A.D., so that it was not till the beginning of the next year that his son Gaurinātha was crowned. He struck a large series of coins in gold and silver [Pl. XXV. 1-5], and introduced a still smaller denomination, the one-thirty-second muhur and rupee [Pl. XXV. 5]. He was a cruel and incompetent king, and his oppressions drove the Moamarías to rebellion early in his reign. He was driven from his capital, and after the country had suffered exceedingly from the revolution, he was reduced to appeal for help to the British in 1792. With their help he was established on his throne in 1793, but on the withdrawal of the British expedition his misgovernment again threw the country into a state of revolution. After a troubled reign he died, unregretted, about the end of 1795 A.D., and was succeeded by Kinaram, a distant relative.

During the struggle between Gaurinātha and the Moamarías, several individuals set themselves up as Rājas in various parts of the country. Of these the most important were Bharatha Siṃha who was set up at Rangpur by the Moamarías, and Sarvānanda Siṃha who led the Morāns in the east. That their rule was by no means transitory is shown by the fact that we still have coins of Bharatha Siṃha [Pl. XXV. 6, 7, 8], dated Śāke 1713, 1714, 1715, 1718, and 1719, and of Sarvānanda [Pl. XXV. 9, 10], Śāke 1715, 1716, and 1717.

Kinaram took the title of Kamaleśvara on ascending the throne in 1795. Owing to the ability of his prime minister, the country gradually regained some of its former prosperity in his reign. He struck coins which are now rare, the only date known being Śāke 1720

(1798 A.D.) [Pl. XXV. 11, 12]. On his death, in 1810, he was succeeded by his brother Candrakānta [Pl. XXV. 13, 14], whose reign was a troubled one. The Burmese occupied the country in 1816, and were bought off in 1817. On their withdrawal Bhrajanātha Siṃha, a grandson of Rāješvara Siṃha, collected an army and drove Candrakānta from Jorhut the capital to Rangpur. Bhrajanātha struck coins [Pl. XXV. 15, 16, 17] dated Śāke 1739 and 1740 (early in 1818 and 1819 A.D.). He was ineligible for the throne, as he had suffered mutilation, so his son Purandar Siṃha was made king instead. As no coins of Purandar are known, while we have coins of his father issued in the two years he reigned, it is probable that his election was merely nominal.

Early in 1819 Candrakānta, with the help of the Burmese, defeated Purandar Siṃha, and was reinstated. The real power, however, was retained by the Burmese, and in 1821, Candrakānta, fearing treachery, fled to British territory. The Burmese, having tried in vain to tempt him back, set up a prince named Jogeśvara, of whom undated quarter-rupees are known [Pl. XXV. 18]. He was the last Assamese king to issue coins. Candrakānta collected an army and endeavoured to drive out the Burmese, but, after a brief period of success, had to take refuge again in British territory. Purandar Siṃha also made an unsuccessful attempt to gain the throne. In 1823 Candrakānta was enticed back by the Burmese, and treacherously imprisoned in Rangpur.

Outrages by the Burmese in British protectorates soon provoked a reprisal. A British expedition was sent to attack them in 1824, and after much fighting the Burmese withdrew in 1826. Purandar Siṃha was set up as king in Upper Assam, while the remainder

became a British protectorate. Purandar's rule proved a failure, and he was deposed in 1838, when his territory passed under British rule.

THE COINS.

Though King Śuklenmung, in instituting a coinage, was only copying his more civilized neighbours in India, the only trace of Indian influence was in the standard which he adopted. The shape, the language, script, and the era in which he dated the issue of these coins, were all characteristically Assamese. The standard adopted appears to have been that of a rupee of about 176 grains, apparently founded on the tanka of the Sultans of Delhi. The octagonal shape peculiar to the coins of Assam is said to have been chosen in accordance with a passage in the Jogini Tantra, which describes Kāmarūpa as being eight-sided (Gait, *History*, p. 97).

The language and script of the earliest coins of Śuklenmung, struck in 1544 A.D., were Ahom. Pratāpa Siṃha (1603-48) and Cakradhvaja Siṃha (1663-70 A.D.), the next two kings of whom coins are known, used the Sanskrit language written in the Bengali character, and dated their coins in the Śāka era, said to have been introduced into Assam by Śuklenmung. Udayaditya (1670-73 A.D.) reverted to the earlier type for his coins, and his example was followed by Śuhung (1675 A.D.) and Gadādhara Siṃha (1681-96 A.D.). Coins of Rudra Siṃha (1696-1714 A.D.) and of Śiva Siṃha are still fairly common, but they appear to have struck no Ahom coins. The regular coins of Pramatta Siṃha (1744-51 A.D.) and of Rājeśvara Siṃha (1751-69 A.D.) have Sanskrit legends, but a few coins are known of these kings with Ahom legends. It is probable

that these latter were struck only for the ceremonial distribution at the coronation ceremony, and were not current coins. From the time of Lakshmī Siṃha (1769-80 A.D.) to the end of the dynasty only coins with Sanskrit legends were struck, so completely Hinduized had the kings become. From the scarcity of the earlier coins it is probable that they were not generally current but were only struck on special occasions. It is not till the reign of Rudra Siṃha that we have a regular coinage.

Besides Ahom and Sanskrit, Persian has been used on the coins of Assam. Śiva Siṃha and Pramathēśvari issued square coins with Persian legends in 1729 A.D., and Rājeśvara issued similar coins in 1752 A.D., and again in 1763 A.D., the latter being octagonal. The square shape and the distiches employed on them mark them as close imitations of the coins of the Moghul Emperors.

Coins bearing Sanskrit legends are dated in the Śāka era, which begins in 78 A.D., occasionally with the addition of the regnal year. The coins with Ahom legends are dated in the sixty-year cycle, which was instituted by the Chinese centuries before the Christian era. It is the cycle known to the Hindu astronomers as the Vṛhaspaticakra. The Ahom word for a year in this cycle is "lākni," which occurs on the coins. The names of the lāknis are formed by combining the words in a series of ten with those in a series of twelve. Thus the sixth year is named by combining the sixth year in each cycle. At the end of ten years the denary cycle is exhausted, and we have to go back to the beginning. The twelfth year is named by combining the second word of the denary with the twelfth of the duodenary cycle. The duodenary cycle is now exhausted and is begun again. After sixty years we have the tenth of the

denary with the twelfth of the duodenary, which is the last year of a cycle.

The Ahoms began their first cycle in 568 A.D., when their first king, Kunlai, descended from heaven. To get the date A.D. from the date on a coin, we add together $568 + (\text{number of completed cycles} \times 60) + \text{year on coin}$. Thus the gold coin of Rājeśvara in the British Museum is dated 43rd year. Its date is, therefore, $568 + (60 \times 19) + 43 = 1751$, assuming we know from other sources in which cycle Rājeśvara's date would fall.

The Ahom kings have from the beginning of their currency coined both in silver and gold. The gold coin is of the same weight as the silver or rupee, and may be called a muhur. Gold coins are rare until the time of Rājeśvara Siṃha. Rudra Siṃha appears to have been the first to introduce subdivisions of the muhur and rupee. He struck the half- and quarter-rupee. Rājeśvara introduced the eighth and sixteenth, and Gaurinātha a further subdivision, the thirty-second. There has never been a copper currency in Assam; its place was taken by cowries, though the introduction of the one-sixteenth and one-thirty-second rupee shows that in later times there was a demand for a more convenient form of small change.

Robinson, in his *Grammar of the Assamese Language*, gives the following table of gold and silver weights:—

3 rati	= 1 adāna or $\frac{1}{2}$ ānā
2 adāna	= 1 tsatāriya ānā or $\frac{1}{16}$ rupee
2 tsatāriya	= 1 admahā
2 admahā	= 1 mahā, a sikhi or $\frac{1}{4}$ rupee
2 mahā	= 1 adhali, $\frac{1}{2}$ rupee
2 adhali	= 1 tola, a rupee weight

The reverse inscriptions on the coins are devotional in

character; simple at first, they gradually became very elaborate in their phraseology. On the Ahom coins the reverse formula is, "I, the king, give praise to (name of god)." The deities on the Ahom coins are Lengdun, identified with Indra; Tārā, identified with Parvatī; and Phatuceng, identified with Vishnu. The legends on the coins with Sanskrit legends proclaim the kings to be devotees of Śiva and Parvatī, as befits adherents of the Śakta sect. The names of Śiva occurring are Śiva, Rāma, and Hara, while Parvatī usually appears as Gaurī. Bharatha Siṃha, who was appointed king by the Moamarias on their rebellion in the reign of Gaurinātha, declares himself a worshipper of Kṛishṇa, as the Moamarias were a Vaishnava sect [Pl. XXV. 6]. Bhrajanātha calls himself on his coins "a bee on the nectar of the lotus-feet of Kṛishṇa and Rādha" (the consort of Kṛishṇa) [Pl. XXV. 15].

The obverse inscription contains the name of the king and the date. On the coins of smaller denomination the devotional legend is dropped, and the name and title fill both sides of the coins. At the foot of the obverse of the larger coins there is usually a small animal, intended, as Marsden pointed out, for a "siṃha," or mythological lion, in allusion to the name of the dynasty. Other, though rarer, symbols occurring on the earlier Ahom coins are a rising sun, a bird, and a deer.

An interesting feature of the coins of Assam was pointed out by Marsden (p. 778). While in most Indian coins the relative position of the dies is accidental, on the coins of Assam they were arranged thus, $\uparrow\downarrow$, so that "the impressions of the opposite sides are coincident upon turning the coins perpendicularly."

The majority of the coins in the following catalogue

are in the National Collection. To make the series as complete as possible, a number of specimens from other collections has been added. A date in italics signifies that coins of that year are known, but none are in the British Museum Collection. In the case of the more important coins, the collections in which they occur are stated.

CATALOGUE OF ASSAMESE COINS.

ŚUKLENMUNG, 1539-52 A.D.

Muhur.

Obverse.
Cāo phā
Śuklenmung
pin cān
lākni
plekni.

Reverse.
Kāō
bay phā
Tārā
hēu cu.

(Rising sun below l. and r.)

N. 85. Wt. 145. [Pl. XXIII. 1.]

Plekni, 15th year of cycle, equal to 1543 A.D.

*Rupce.*Similar. R. 95. Wt. 175.7.⁶

ŚUŚENGPHĀ, WITH TITLE SYARGA (SURGA) NARĀYAṆA,
1611-49 A.D.

(a) No Ahom coins known.

(β) Sanskrit coins.

Rupce.

Śrī Śrī Su-
rga nārāyaṇ'a
devaṇya Śāke
1570.

Śrī Śrī Hā-
ri-Haracara-
n'aparāya-
n'asya.

R. 9. Wt. 177.4. [Pl. XXIII. 7.]

⁶ Cf. Gait, *J. A. S. B.*, 1895, Pl. xxvii. 1, and *Cat. of Coins in Indian Museum*, vol. i. p. 298, No. 1.

⁷ On the coins the dental n, न, is frequently written in place of the more correct ण.

Obverse.

Similar.

Reverse.

*Śrī Śrī Ha-
-ri-Harendraca-
-ranaparāya-
-nasya.*

= 1648 A.D.

R. .95. Wt. 177.8.

CAKRADHVAJA SĪMHA, 1663-70 A.D.

(α) No Ahom coins known.

(β) Sanskrit coins. (Cf. *J. A. S. B.*, 1864, p. 581.)*Rupce.*

*Śrī Śrī Su-
-ryadeva Cakradhva-
-jasīṃhasya Śāke*

1585.

= 1663 A.D.

*Śrī Śrī Śi-
-va-Rāmapadā-
-ravindaparā-
-yanasya.*

R. .8. Wt. 170.7. [Pl. XXIII. 8.]

ŚUNYATPRĀ OR UDAYADITYA, 1669-72 A.D.

(α) Ahom coins.

Muhur.

*Śunyat
phā pin
cān cānpī
kāpsān.
(Bird r.)*

*Kāō bay
Phātuceng
phray hūn
hēu cu.*

N. .9. Wt. 176.6. [Pl. XXIII. 2.]

Year 21 of cycle = 1669 A.D.

Rupce.

Similar (rising sun below). R. .9. Wt. 174.8.

(β) No Sanskrit coins.

ŚUHUNG, 1675 A.D.

(α) Ahom coins.

Rupce.

*Cāō phā
Śuhung pin
khun lākni
khutngi.*

*Kāō bay
Phātuceng
hēu cu.*

(Rising sun below.)

R. .9. Wt. 161. [Pl. XXIII. 3.]

27th year = 1675 A.D.

(β) No Sanskrit coins known.

ŚUPATPHĀ OR GADĀDHARA ŚIMHA, 1681-95 A.D.

(a) Ahom coins.

Rupce.

Obverse.	Reverse.
<i>Cāo Śu-</i>	<i>Kāo bay</i>
<i>-patphā pi-</i>	<i>phā Leng</i>
<i>-n khun lāk-</i>	<i>dan hēu</i>
<i>-ni raiśān.</i>	<i>cu.</i>
("Śimha" below.)	(Bird below.)*

R. 95. Wt. 173.8. [Pl. XXIII. 4.]

33rd year of cycle = 1681 A.D.

(β) No Sanskrit coins known.

RUDRA ŚIMHA, 1696-1714 A.D.

(a) No coins with Ahom legends.

(β) Coins with Sanskrit legends.

Rupce.

Obverse.	Reverse.
<i>Śrī Śrīmat</i>	<i>Śrī Śrī Ha-</i>
<i>Scargadeva Rudra</i>	<i>-ra-Gauripa-</i>
<i>-śimhasya Śā</i>	<i>-dāmbujamadhū-</i>
<i>-ke 1618.</i>	<i>-karasya.</i>
("Śimha" r.)	

R. 9. Wt. 173.2. [Pl. XXIII. 9.]

Similar, dated 1619, 1620, 1621, 1622, 1623, 1625, 1626, 1627, 1630, 1631, 1632, 1633, 1634, 1635, 1636.

Half-Rupce.

Obverse.	Reverse.
<i>Śrī Śrī</i>	<i>Śrī Śrī</i>
<i>Rudrasi-</i>	<i>Śivapada-</i>
<i>-mhasya.</i>	<i>-parasya.</i>

R. 7. Wt. 87.5. [Pl. XXIII. 11.]

Quarter-Rupce.

Obverse.	Reverse.
<i>Śrī Śrī</i>	<i>Śake</i>
<i>Rudrasimha-</i>	1619.
<i>-urpasya.</i>	

R. 5. Wt. 42.2. [Pl. XXIII. 12.]

* Cf. J. A. S. B., 1895, Pl. xxvii. 2-5, and C. C. I. M., vol. i. p. 298, Nos. 1-6.

ŚIVA ŚIMHA, 1714-44 A.D.

- (a) No Ahom coins are known of Śiva Śimha or his wives.
 (β) Sanskrit coins.
 (a) In name of Śiva Śimha alone.

Quarter-Muhur.

Obverse.
 Śrī Śrī
 Śiva Śimha
 nr̥pasya.

Reverse.
 Śāke
 1660 : 25.

N. 55. In *Indian Museum Cat.*, p. 300, No. 1.

Rupee.

Śrī Śrīmat
 Svargadeva Śi-
 -vasimha nr̥pasya
 Śāke 1637.
 ("Śimha" r.)

Śrī Śrī Hara-
 -Gauripadā-
 -mbujamadhuka-
 -rasya.

Similar, dated 1638, 1639, 1641, 1642, 1643, 1644 [Pl. XXIII. 10], 1645, 1650, 1654, 1660 : 25, 1661 : 25.

Half-Rupee.

Śrī Śrī Śi-
 -vasimhasya
 24.
 ("Śimha" below l.)

Śrī Śrī
 Śivapada-
 -parasya.

R. 7. Wt. 81.8. [Pl. XXIII. 13.]

Similar, without date or "Śimha."

R. 7. Wt. 87.2.

ŚIVA ŚIMHA WITH PHULEŚVARĪ, 1714-31 A.D.

- (a) With name Phuleśvarī.

Muhur.

Śrī Śrī Śiva-
 -simha nr̥pamahi-
 -shī Śrī Phuleśva-
 -rī devyāh.

Śrī Śrī Ha-
 -ra-Gauripada-
 -parāyaṇyāh
 Śāke 1646.
 ("Śimha" r.)

N. 1. Wt. 176.4. [Pl. XXIII. 14.]

Quarter-Muhur.

Obverse,
Śrī Śi-
-vasinīha
nṛpa-

Reverse,
-jāyā
Phuleśva-
-rgāh.

N. 55. Wt. 43.8. [Pl. XXIII. 16.]

Rupee.

Similar to muhur.

Śāke 1646. R. 1. Wt. 176.7.
also dated 1647, 1648.

(β) With name Pramathēśvarī.

Śrī Śi-
[-vasinī]ha
nṛpa-

[jāyā]⁹
Śrī Pramathe-
-śvarī.

N. 55. In *Indian Museum Cat.*, vol. i. p. 301, No. 1.

Rupee.

As on rupees with title *Phuleśvarī*, but with name *Pramatheśvarī*, date 1649. R. 9. Wt. 175. [Pl. XXIII. 15, obverse only.] Also 1651, 1652, 1653.

Half-Rupee.

Śrī Śrī Śi-
-vasinīha nṛpa-
-mahishī.

Śrī Prama-
-theśvarī-
-devyāh.

R. 7. Wt. 87.4.

(γ) *Square Rupee with Persian Legends.*

شاه

میمنت مانوس

شیو سنک

سنه جلوس¹⁰

هـ ک

ضرب کرکاون

زدچومر

("Simha.") ۱۶۵۱

بحکم بیکم پرمتهی سري

شاه

R. 7. Wt. 175. [Pl. XXIV. 1.]

From a find at Garhgaon.¹⁰

⁹ Mr. Vincent A. Smith reads first word of reverse . . . *mā*. The reading is probably *jāyā* (wife). Cf. quarter-muhur of Phuleśvarī, above.

¹⁰ Cf. Gurdon, *J. A. S. B., Numismatic Supplement*, 1904, pp. 113, 114.

ŚIVA ŚIMHA WITH AMBIKĀ DEVĪ, 1732-38 A.D.

Quarter-Muhur.

Obverse.
Śrī Śrī Śi-
vasimha ma-
hīpa-

Reverse.
-jāyā
Śrīmad Ambi-
-kānām
20.

N. 55. Wt. 43.7. [Pl. XXIV. 6.]

Rupee.

Śrī Śrī Śiva-
simha nrpa udva-
llabha Śrīmad Ambi-
-kādevinām,
("Simha" r.)

Śrī Śrī Hara-
-Gauripada-
-parāyanānām
Śāke 1654:19.

R. 95. Wt. 176.4. [Pl. XXIV. 2.]

Similar, dated 1655:19; 1656:20; 1656:21; 1658:22;
1658:23.

Half-Rupee.

Śrī Śrī Śi-
vasimha na-
-rekvara-
("Simha" l.)

-udvalla-
bha Śrīmad Ambi-
-kādevinām
24.

R. 65. Wt. 87.7. [Pl. XXIV. 4.]

Quarter-Rupee.

Śrī Śrī Śi-
vasimha ma-
-hīpa-

-jāyā
Śrīmad Ambi-
-kānām
20.

R. 6. Wt. 43.8.

ŚIVA ŚIMHA WITH SARVEŚVARĪ, 1739-44 A.D.

Muhur.

Śrī Śrī Śiva-
simha nrpa udva-
llabha Śrī Sarve-
śvarīdevinām
30.

Śrī Śrī Hara-
-Gauripada-
-parāyanānām
Śāke 1665.
("Simha" l.)

N. 95. Wt. 175.8. [Pl. XXIV. 3, *obv.*]

Rupee.

Similar to muhur. 1661 : 25. R. '95. Wt. 173·2.

Other dates, 1663 : 27 ; 1664 : 29 ; 1665 : 30 ; 1666 : 30 ; 1666 : 31.

Half-Rupee.

Obverse.
Śrī Śrī Śi-
-vasinīha na-
-reśvara-

Reverse.
-udvalla-
-bha Śrī Sarve-
-śvarīderinām
29.

R. '55. Wt. 88·2. [Pl. XXIV. 7, rev.]

Year 29 = 1664 Śāke.

Quarter-Rupee.

Śrī Śrī Śi-
-vasinīha ma-
-hīpa-

-udvalla-
-bha Śrī-Sarve-
-śvarīnām.

R. '6. Wt. 44·5. [Pl. XXIV. 5.]

PRAMATTA SĪMHA, 1744-51 A.D.

(a) Ahom coins with title Śunengphā.

Cāo Śu-
-neng phā pin-
-khun lākni
kātkeo.

Kāo bay
phā Lengdun
hūu cu.
(“Sinhā” l.)

R. 1. Wt. 176·5. [Pl. XXIII. 5.]¹¹

Year 36 = 1744 A.D.

(β) Coins with Sanskrit legends.

Half-Muhur.

Śrī Śrī Pra-
-mattasīnhasya
-nrapasya.

Śrī Śrī
Śivapada-
-parasya.

N. '65. Wt. 87·8.

In *Indian Museum Cat.*, vol. i. p. 302, No. 1.

¹¹ Cf. *Cat. Coins in Indian Museum*, vol. I. p. 298, No. 1.

Quarter-Muhur.

Obverse.
Śrī Śrī Pra-
-mattasiṃha
nrpasya.

Reverse.
Śāke
 1671.

N. .6 (ringed).

In *Indian Museum Cat.*, vol. i. p. 302, No. 2.

Rupee.

Śrī Śrī Svarga-
-deva Pramatta-
-siṃha nrpasya
Śāke 1667.
 ("Śiṃha" l.)

Śrī Śrī Hara-
-Gaurīcarana-
-kamalamadhū-
-karasya.

R. .95. *Wt.* 174.2.

Similar, dated 1668 [Pl. XXIV. 8], 1669, 1670, 1672, 1673.

Half-Rupee.

As quarter-muhur.

As half-muhur.

R. .65. *Wt.* 86.7. [Pl. XXIV. 9.]

Quarter-Rupee.

As quarter-muhur.

Śāke 1668.

R. .66. *Wt.* 48.3.

Similar, 1671, 1672 [Pl. XXIV. 10], 1673.

RAJESVARA SIṂHA, 1751-69 A.D.

(a) Ahom coins with title Śurenphā.

Muhur.

Cāo Śu-
-renphā pīn
khun lākni
raisinga.

Kaō bay
phā Lengdun
hēu cu.
 ("Śiṃha" l.)

N. .9. *Wt.* 174.5. [Pl. XXIII. 6.]

Cyclic 43rd year = 1751 A.D.

(β) Coins with Sanskrit legends.

Muhur.

Obverse.
Śrī Śrī Svarga-
deva Śrī Rājase-
nāsīṃha nṛpaśya
Śāke 1674.
("Siṃha" 1.)

Reverse.
Śrī Śrī Hara-
-Gaurīcaranaka-
-malamakaranda-
-madhukarasya.

N. .9. Wt. 175. [Pl. XXIV. 12.]

Similar, dated 1678, 1681, 1684, 1688, 1689.

Quarter-Muhur.

Śrī Śrī Rā-
-jeshvarasi-
-mha nṛpaśya.

Śrī Śrī Śi-
-vapadaparā-
-yaśasya.

(No date.)

N. .55. Wt. 38.3.

Similar.

Śāke
1677.

N. .55. Wt. 42.5. [Pl. XXIV. 15.]

Also dated 1678, 1680.

$\frac{1}{10}$ -*Muhur.*

Śrī Rā-
-jeshvara-

-siṃha
nṛpaśya.

N. .3. Wt. 11. [Pl. XXIV. 13.]

Rupce.

Similar to muhur.

Date 1674.

Æ. .9. Wt. 174.9.

Also dated 1675, 1675 (with inscription in Devanagari characters), 1677, 1678, 1679, 1680, 1682, 1683, 1684, 1685, 1686, 1687, 1688, 1689, 1690.

Half-Rupce.

Inscriptions as on undated quarter-muhur.

(No date.)

Æ. .65. Wt. 87.8. [Pl. XXIV. 14.]

Quarter-Rupree.

Obverse.
*Śrī Śrī Rā-
 jekkarasiṃha
 nṛpasya.*

Reverse.
*Śāke
 1674.*

℞. 55. Wt. 43.4.

Similar, dated 1676, 1678, 1679, 1682, 1684, 1689, 1690.

 $\frac{1}{2}$ -Rupree.

*Śrī Śrī Rā-
 jekvara*

*siṃha nṛ-
 pasya.*

℞. 45. Wt. 21.8.

 $\frac{1}{16}$ -Rupree.

*Śrī Rā-
 jekvara*

*siṃha
 nṛpasya.*

℞. 35. Wt. 10.6.

(γ) Coins with Persian legends struck at Rangpur.¹²

شید و ماه
 سلطان چو محور
 —————
 زد این عالم پناه
 سري راج شرسنگ

مانوس ۱۶۷۴
 مینت
 سنة جلوس
 ضرب
 رنکپور

(*"Siṃha" r.*)
Śāke 1674.

℞. 75 square. Wt. 176.1. [Pl. XXIV. 11.]

Similar.

Similar, but
 date ۱۶۸۵
Śāke 1685.

℞. 85 octagonal. Wt. 173.7.

¹² These coins were published by Marsden, MCC.-MCOI., who read the king's name "Narsinghā."

LAKSHMI SĪMHA, 1769-80 A.D.

*Muhur.**Obverse.*

Śrī Śrī Svarga-
deva Śrī Lakshmi-
sīṃha nṛpaśya
Śāke 1701.
("Sīṃha" r.)

Reverse.

Śrī Śrī Hara-
-Gaurīcaranār-
-vindamakaranda-
-madhukarasya.

N. .8. Wt. 175.4.

Half-Muhur.

Śrī Śrī La-
-kshmisīṃha
narendrasya.

Śrī Śrī Ha-
-ra-Gaurīpa-
-dapasya.

N. .65. Wt. 82.2. [Pl. XXIV. 16.]

Quarter-Muhur.

Śrī Śrī La-
-kshmisīṃha
nṛpaśya.

Śāke
1692.

N. .5. Wt. 43.4.

Similar, 1696. N. .5. Wt. 45.

Śrī Śrī La-
-kshmisīṃ-
-ha nṛpaśya.

Śāke
1692.

N. .45, square. Wt. 43.5. [Pl. XXIV. 17.]

 $\frac{1}{8}$ -*Muhur.*

Śrī Śrī La-
-kshmi

sīṃha
nṛpaśya.

N. .4. Wt. 21.5. [Pl. XXIV. 18.]

 $\frac{1}{16}$ -*Muhur.*

Śrī La-
-kshmi

sīṃha
nṛpaśya.

N. .35. Wt. 10.7.

Rupee.

Similar to muhur, Śāke 1692. R. .5. Wt. 176.7.
1693 [Pl. XXIV. 19], 1694, 1695, 1697, 1698, 1699, 1700.

Half-Rupee.

Similar to half-muhur.

R. .6. Wt. 86.6.

Quarter-Rupee.

Obverse.

As on quarter-muhur.

Reverse.

Śāke

1692.

R. .5. Wt. 42.5.

Also dated 1693, 1694, 1695, 1696, 1697, 1698, 1699, 1700, 1701, 1702.

 $\frac{1}{8}$ -*Rupee.*Similar to $\frac{1}{8}$ -muhur.

R. .45. Wt. 22.4.

 $\frac{1}{16}$ -*Rupee.*Similar to $\frac{1}{16}$ -muhur.

R. .35. Wt. 11. [PL XXIV. 20.]

GAURĪNĀTHA SĪMHA, 1780-96 A.D.

Muhur.

Śrī Śrī Svarga-
deva Śrī Gaurīnā-
thasīmha nṛpaśya
Śāke 1716.
("Sīmha" 1.)

Śrī Śrī Hara-
-Gaurīcaranaka-
malamakaranda-
-madhukarasya.

Also 1718. A. .85. Wt. 175.2.

Half-Muhur.

Śrī Śrī Gau-
-rīnāthasīm-
-ha nṛpaśya.
13.

Śrī Śrī Ha-
-ra-Gaurīpa-
-daparasya.

A. .65. Wt. 87.2.

= Śāke 1714.

Similar, undated.

A. .65. Wt. 82.4.

Quarter-Muhur.

Obverse.
*Śrī Śrī Gau-
 -rīnāthasim-
 -ha nṛpasya.*

Reverse.
*Śāke
 1707
 6.*

N. .55. *Wt.* 43.2. [*Pl.* XXV. 3.]

Similar, dated 1711, 1716.

 $\frac{1}{8}$ -*Muhur.*

*Śrī Śrī Gau-
 -rīnātha*

*simha nṛ-
 -pasya.*

N. .4. *Wt.* 21.5.

 $\frac{1}{16}$ -*Muhur.*

*Śrī Gau-
 -rīnātha*

*simha
 nṛpasya.*

N. .3. *Wt.* 10.5.

 $\frac{1}{32}$ -*Muhur.*

*Śrī
 Gau-*

*-rīnā-
 -thasya.*

N. .25. *Wt.* 5.3.

Rupee.

Similar to muhur. *Śāke* 1703.

R. .95. *Wt.* 173.4. [*Pl.* XXV. 1.]

Similar, dated 1704, 1705, 1706, 1707, 1708, 1709, 1711, 1716, 1717.

Half-Rupee.

Similar to half-muhur, undated.

R. .65. *Wt.* 88.4. [*Pl.* XXV. 2.]

Also dated years of reign, 1, 7, 8, 16.

Quarter-Rupee.

Similar to quarter-muhur, *Śāke* 1704.

R. .55. *Wt.* 43.5.

Also dated 1705; 1706:5; 1707:6; 1708; 1709:8; 1712:11; 1716; 1717:16.

$\frac{1}{8}$ -Rupee.Similar to $\frac{1}{8}$ -muhur.

R. 45. Wt. 21.2. [Pl. XXV. 4.]

 $\frac{1}{16}$ -Rupee.Similar to $\frac{1}{16}$ -muhur.

R. 35. Wt. 10.4.

 $\frac{1}{32}$ -Rupee.Similar to $\frac{1}{32}$ -muhur.

R. 25. Wt. 5.3. [Pl. XXV. 5.]

BHARATHA SĪMHA, AT RANGPUR, 1791-97 A.D.

 $\frac{1}{8}$ -Muhur.Obverse.
Śrī Śrī
BharathaReverse.
sīmha
nṛpasya.

N. 45. Wt. 23.3.

Rupee.

Śrī Śrī Bhagadatta-
kulaḍbhava¹² Śrī Bha-
rathasīmha nṛpasya
Śāke 1715.
("Sīmha" r.)Śrī Śrī Kṛṣṇa-
caraṇāravinda-
makarandapramatta-
madhukarasya.

R. 95. Wt. 174.5. [Pl. XXV. 6.]

Similar, 1713, 1714, 1718, 1719.

Half-Rupee.

Śrī Śrī Bha-
rathasīmha na-
rendrasya.Śrī Śrī Kṛ-
ṣṇapadapar-
āyanasya.

R. 7. Wt. 87. [Pl. XXV. 7.]

¹² The actual reading of the first part of this compound is *kula* (a misprint for *kula*, race). The second part is clearly *uḍbhava* (sprung from), not *udvara* as in *C.I.M.*, vol. 1. p. 306.

Quarter-Rupee.

Obverse.
Śrī Śrī Bha-
-rathasiṃha
-nṛpasya.

Reverse.
Śāke
1715.

Æ. .55. Wt. 44. [Pl. XXV. 8.]

 $\frac{1}{8}$ -Rupee.

Śrī Śrī
Bharatīa

siṃha-
-nṛpasya,

Æ. .55. Wt. 21.7.

SARVĀNANDA SIṂHA, 1794-95 A.D.

Quarter-Muhur.

Śrī Śrī Sa-
-rvvānandasi-
-ṃha nṛpasya.

Śāke
1716.

N. .55. Wt. 44.

Rupee.

Śrī Śrī Svarga-
-deva Sarvānanda-
-siṃha narendrasya
Śāke 1716.
("Siṃha" 1.)

Śrī Śrī Kṛṣṇa-
-pādapadmadvanda-
-makarandavṛnda-
-madhukarasya.

Æ. .95. Wt. 174.2. [Pl. XXV. 9.]

Similar. Śāke 1715,¹⁴ 1717.

Quarter-Rupee.

Similar to quarter-muhur. Śāke 1716.

Æ. .6. Wt. 44.5. [Pl. XXV. 10.]

KAMALEŚVARA SIṂHA, 1796-1810 A.D.

Rupee.

Śrī Śrī Svarga-
-deva Śrī Kamaleśva-
-rasīṃha narendrasya
Śāke 1720.
("Siṃha" 1.)

Śrī Śrī Hara-
-Gaurīcaraṇaka-
-malamakaranda-
-madhukarasya.

Æ. .95. Wt. 175.7. [Pl. XXV. 11.]

¹⁴ White King Catalogue, No. 6126. I have not had an opportunity of verifying this date.

Half-Rupée.

Obverse.
*Śrī Śrī Ka-
 -maleśvarasi-
 -mha nṛpaśya.*

Reverse.
*Śrī Śrī Ha-
 -ra-Gaurīcara-
 -nāparasya.*

R. 65. Wt. 87.7. [Pl. XXV. 12.]

CANDRAKĀNTA ŚIMHA, 1810-19.

Muhur.

*Śrī Śrī Svarga-
 -deva Śrī Candrakā-
 -ntasiṃha narendrasya*
 Śāke 1741.
 ("Śimha" 1.)

*Śrī Śrī Hara-
 -Gaurīcaranāra-
 -vindamakarānda-
 -madhukarasya.*

N. 9. Wt. 175. [Pl. XXV. 13.]

Half-Rupée.

*Śrī Śrī Candra-
 -kāntasiṃha
 narendrasya.*

*Śrī Śrī Ha-
 -ra-Gaurīpa-
 -daparasya.*

R. 7. Wt. 88.7. [Pl. XXV. 14.]

 $\frac{1}{16}$ *Rupée.*

*Śrī Ca-
 -ndrakānta*

*siṃha na-
 -rendrasya.*

R. 45. Wt. 11.2.

 $\frac{1}{32}$ *Rupée.*

*Śrī Ca-
 -ndra-*

*-kānta-
 -śya.*

R. 25. Wt. 5.2.

BHRAJANĀTHA ŚIMHA, 1818-19 A.D.

Muhur.

*Śrī Śrī Svarga-
 -deva Śrī Bhrajanā-
 -thasiṃha nṛpaśya*
 Śāke 17(40).

*Śrī Śrī Bādhā-
 -Kṛṣṇacarapāka-
 -mulamakarānda-
 -madhukarasya.*

N. 9. Wt. 172.3.

 $\frac{1}{4}$ *Muhur.*

Śāke 1739. N. 55. Wt. 43.5. (Catalogue
 of Sir J. A. Bourdillon's Collection, 1907, No. 1891.)

Rupee.

Similar to muhur. Śāke 1739.

R. .95. Wt. 174.6. [Pl. XXV. 15.]

Similar. Śāke 1740.

Half-Rupee.

Obverse.

Śrī Śrī Bhra-
-janāthasi-
-mha nṛpasya.

Reverse.

Śrī Śrī Rā-
-dhā-Kṛṣṇapa-
-daparasya.

R. .7. Wt. 87.5. [Pl. XXV. 16.]

 $\frac{1}{8}$ -Rupee.Śrī Śrī Bhra-
-janāthasimha nṛ-
-pasya.

R. .4. Wt. 22.

 $\frac{1}{16}$ -Rupee.Śrī Bhra-
-janāthasimha
-nṛpasya.

R. .35. Wt. 11.7. [Pl. XXV. 17.]

 $\frac{1}{32}$ -Rupee.Śrī
Bhra--janā-
-thasya.

R. .25. Wt. 6.1.

JOGĒŚVARA ŚIMHA, 1819.

*Half-Rupee.*Śrī Śrī Jo-
-geśvarasi-
-mha nṛpasya.Śrī Śrī Ha-
-ra-Gaurīpa-
-daparasya.

R. .65. Wt. 87. [Pl. XXV. 18.]

In the collection of Colonel J. Biddulph.

No great variety is presented by the Sanskrit legends on these coins. On the larger denominations the obverse bears the name of the king, in the genitive case, and the

date of issue; and the reverse, a phrase in apposition, expressive of his devotion to some deity or deities.

The obverse inscription of a muhur of Rājesvara Siṃha may be taken as typical: "(coin) of the king (*nṛpaśya*) Rājesvara Siṃha, the heavenly deity (*svargadeva*)."
Some of the later kings substitute for *nṛpa* its synonym *narendra*.

The phraseology of the reverse inscriptions varies rather more than that of the obverse. Cakradhvaja Siṃha, on the reverse of his rupees, describes himself as "devoted (*parāyaṇasya* (gen.)) to the lotus (*aravinda*) of the feet (*pada*) of the divine Śiva and Rāma." Rudra Siṃha, Śiva Siṃha, and Pramatta Siṃha express their religious enthusiasm by the phrase, "a bee (*madhukarasya* (gen.)) on the lotus (*ambuja* or *kamala*) of the feet (*pada* or *carana*) of Hara and Gauri." A still more elaborate formula is used by Rājesvara Siṃha and his successors in the regular line: "a bee (*madhukarasya*) on the honey (*makaranda*) of the lotus (*kamala*) of the feet (*carana*) of Hara and Gauri."

Bharatha Siṃha describes himself, on the obverse of his coins, as "sprung (*udbhava*) from the race (*kula*) of Bhagadatta," and on the reverse as "a bee (*madhukarasya*) intoxicated (*pramatta*) with the honey (*makaranda*) on the lotus (*aravinda*) of the feet (*carana*) of Kṛṣṇa."

Sarvānanda Siṃha proclaims his attachment to Kṛṣṇa by the phrase, "a bee (*madhukarasya*) on the heap (*vrnda*) of honey (*makaranda*) of the lotus (*padma*) pair (*dvanda*) of feet (*pāda*) of Kṛṣṇa."

The inscriptions on the coins of Śiva Siṃha and Phuleśvari are as follows: *Obv.*: "(coin) of the divine (*devyāḥ*) Phuleśvari (or Pramathesvari), queen (*mahishi*, or *jāyā* (wife)) of the king (*nṛpa*) Śiva Siṃha." *Rev.*:

“devoted (*parāyaṇāyāḥ* (gen.)) to the feet (*pada*) of Hara and Gauri.”

The inscriptions on the coins of Śiva Siṃha with Ambikā Devī and Sarveśvarī differ only in being in the plural instead of the singular, and in using *udvallabha* (beloved) instead of *mahishī*.

The Persian legends are modelled on those of the Moghul Emperors. The Persian coins of Śiva Siṃha and Pramathesvarī are interesting, as the legends state that they were struck by order of Pramathesvarī, though Śiva Siṃha's name also appears on them. The distich on Rājesvara Siṃha's Persian coins is copied from a common Moghul one, “Rājesvara Siṃha, the protector of the world, struck money like the sun and moon.”

For the Ahom legends I am indebted to Golap Candra Barua's account of some Ahom coins, published by Mr. Gait in the *J. A. S. B.*, 1895. As the Ahom legends of different kings differ only in the name of the deity and date, the translation of the legends of one coin will suffice, *e.g.* of Śupatphā (Gadādhara Siṃha).

Obv.: “The great (*cāō*) Śupatphā reigns (*pin khun*) year (*lākni*) 33 (*raiśan*) (1681 A.D.)” *Rev.*: “I (*kāō*) the king (*phā*) prayer (*bay*) offer (*hēu cu*) to Indra (*Lengdun*).”

The Ahom coins have been placed together on Plate XXIII. for convenience of identification.

J. ALLAN.

MISCELLANEA.



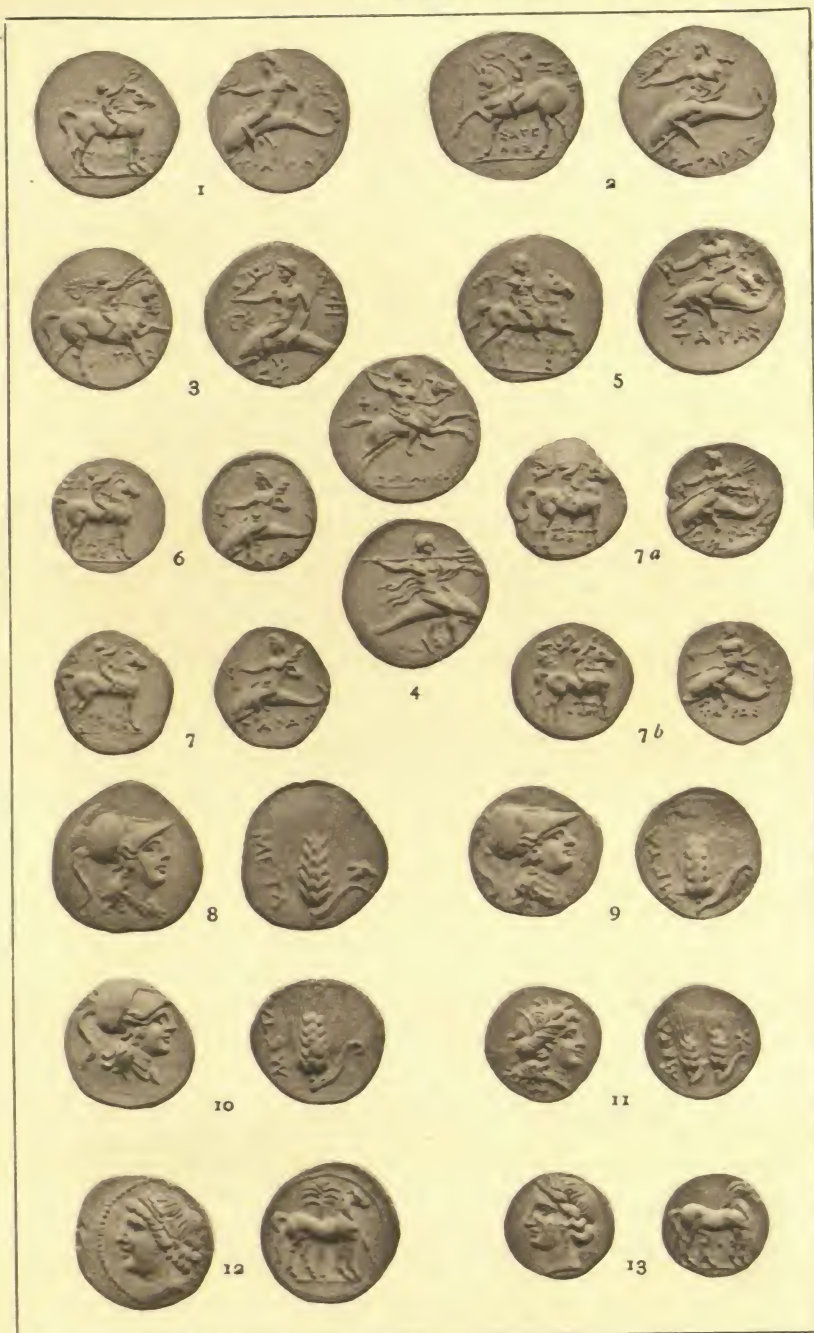
A UNIQUE PENNY OF HENRY I, STRUCK AT DERBY.

THE unique penny here illustrated is, it is thought, worthy of a passing notice; not so much because it is of an unpublished mint of the reign, as on account of its curious and somewhat puzzling reverse legend. As is usual with these pennies, the whole inscription is not so clear as it might be, but there is sufficient of it to leave no doubt that it reads + BRVN : ON : DERBIDEI ; the only really uncertain letter being the initial of the mint-name. A portion of the semicircular back of a D is, however, plain enough, and justifies the assumption of its being that letter.

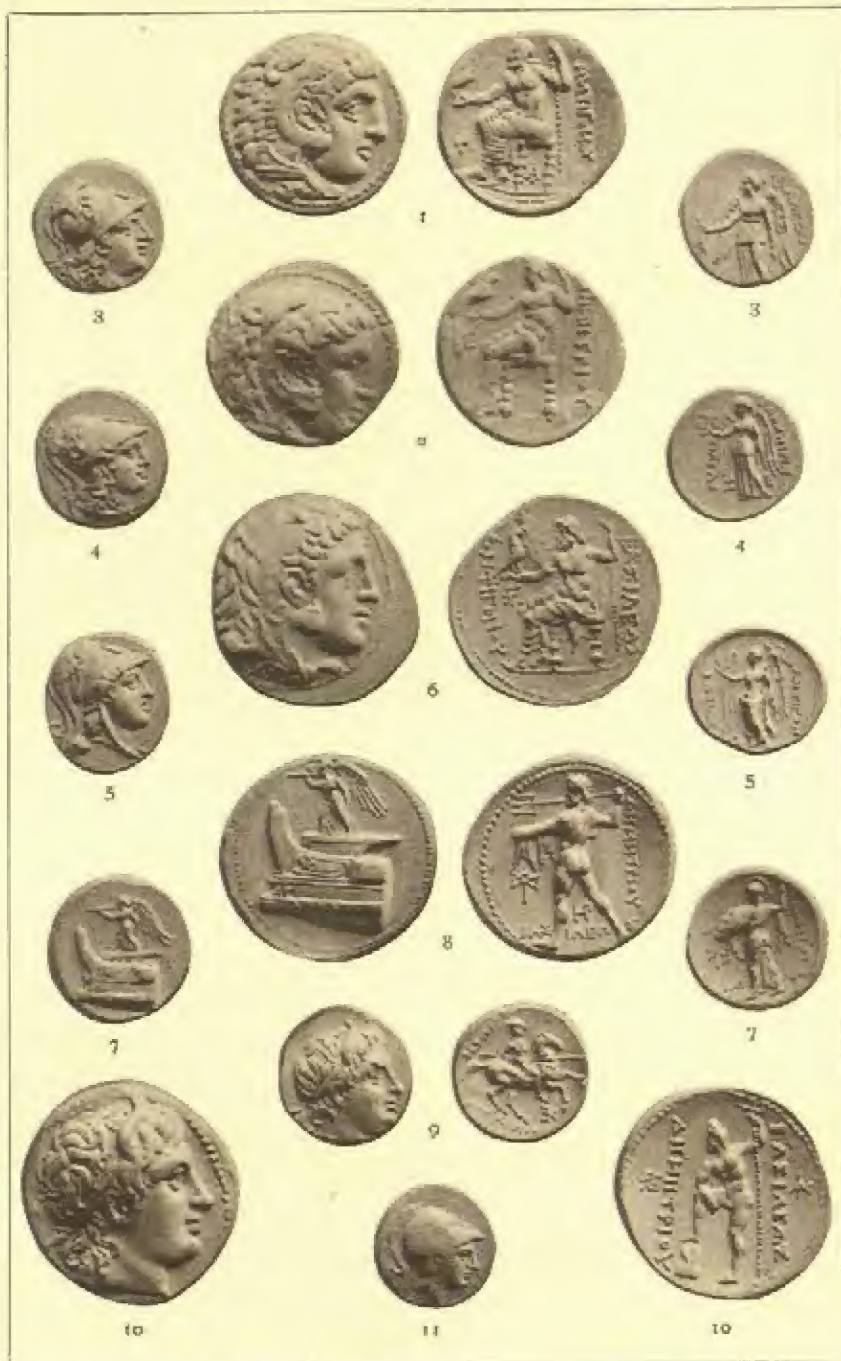
There is no reading published in the treatises relating to the coins of Henry I that approximates to the inscription on the coin under notice, but the first five letters of the mint-name, viz. DERBI, comprise the well-known Norman form of the town of Derby, and, in the absence of evidence to the contrary, it seems justifiable to consider the coin as of that mint, more especially as it is known that the name of Brun occurs in Derbyshire at approximately the same period. This very legible terminal DEI is, of course, the only stumbling-block to the acceptance of Derby as the place of issue. This may, however, be explained by the fact that as both the mint-name and that of the moneyer are in small letters, the maker of the dies miscalculated the distance round the coin to be covered, and so, when he found a considerable space left over, commenced to repunch the letters of the mint-name and got as far as the upright stroke of the third letter, R.

If Derby cannot be accepted as the place-name, we must look for an entirely new Norman mint as responsible for the issue of the coin. In either case, a new town would be added to the list of those which issued coins of Henry I.

H. ALEXANDER PARSONS.



A FIND OF ANCIENT COINS AT TARANTO
(M. P. VLASTO COLLECTION)



COINS OF
ANTIGONUS I AND DEMETRIUS POLIORCETES



1



2

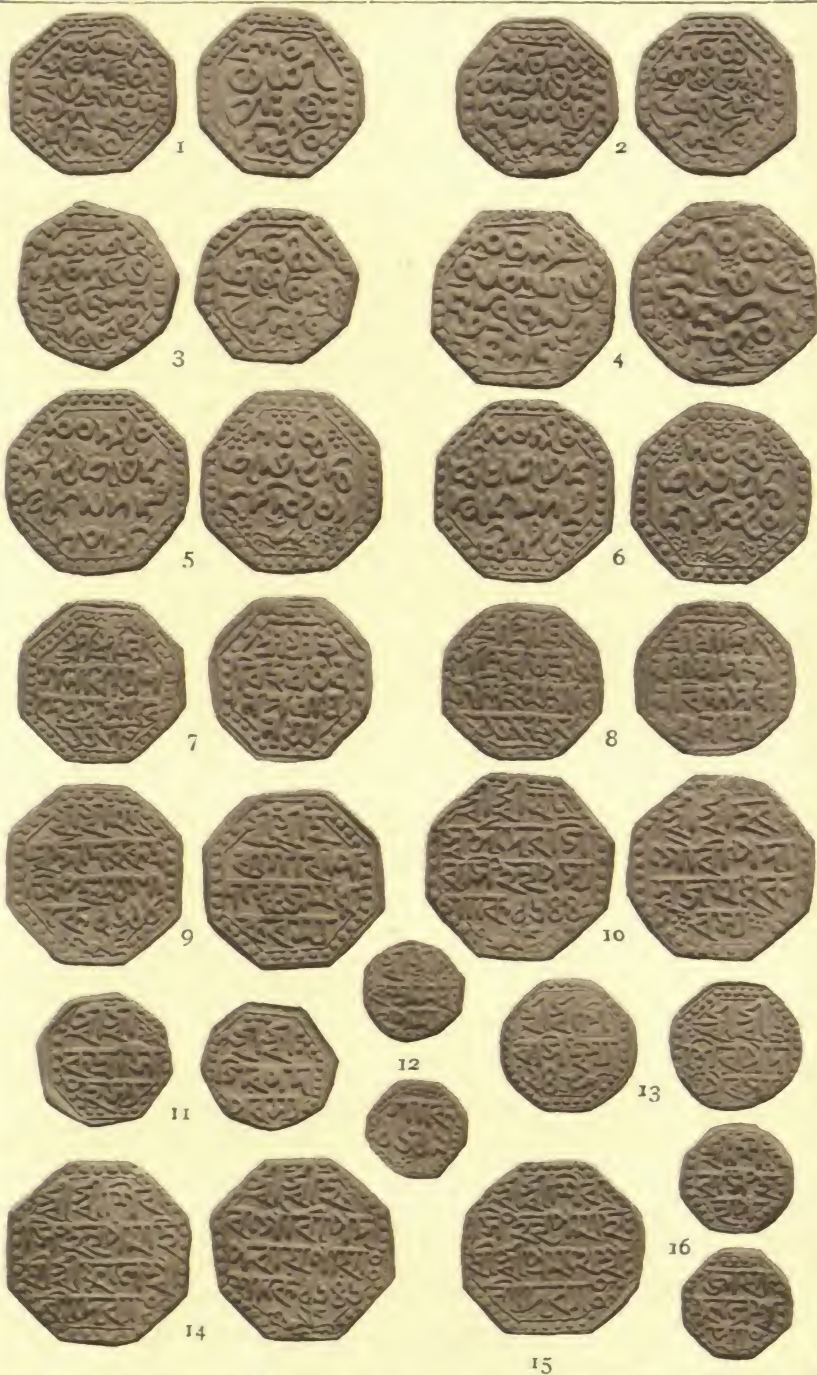


3

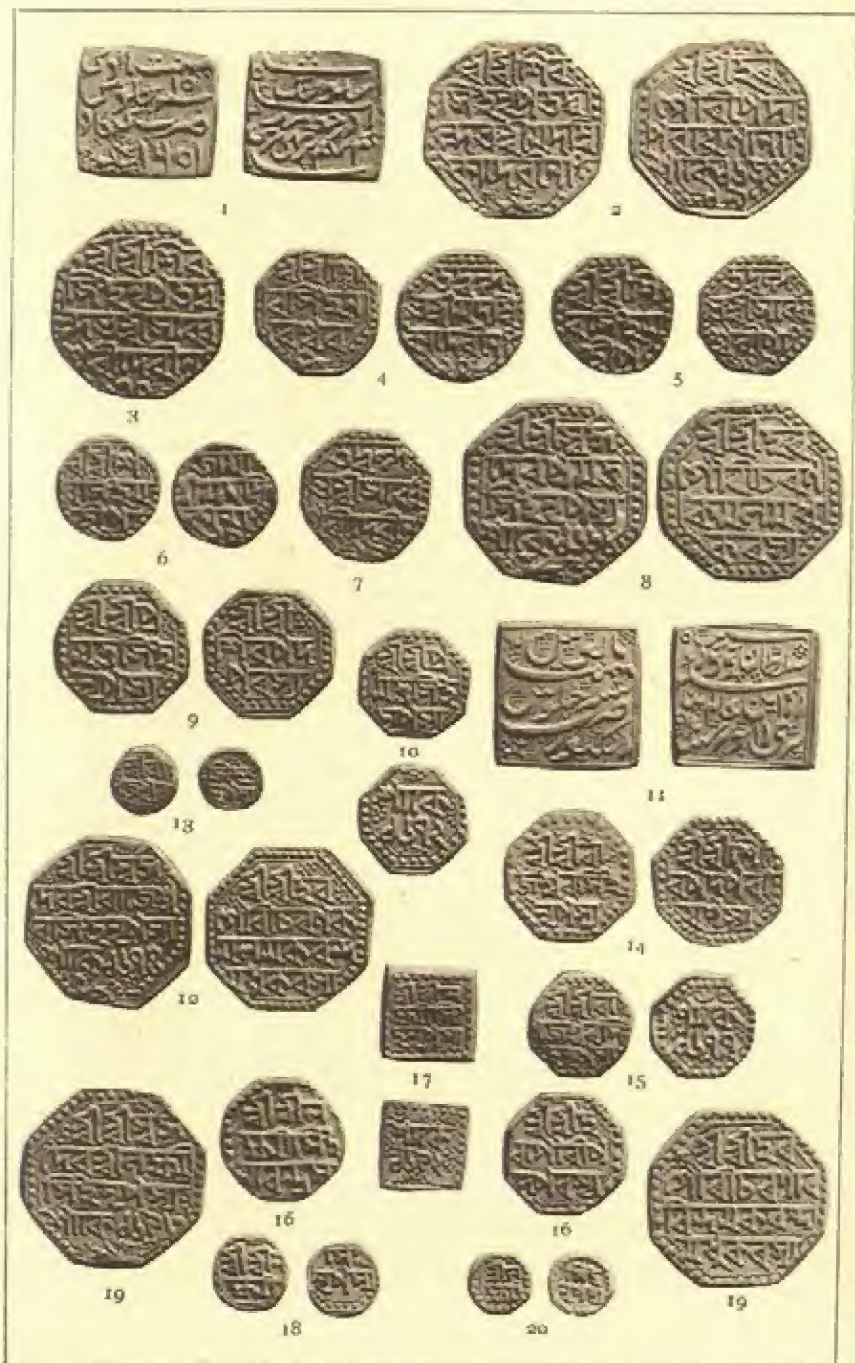
SIR JOHN CHEKE, RICHARD WHITE, AND
MARCO MANTOVA BENAVIDES

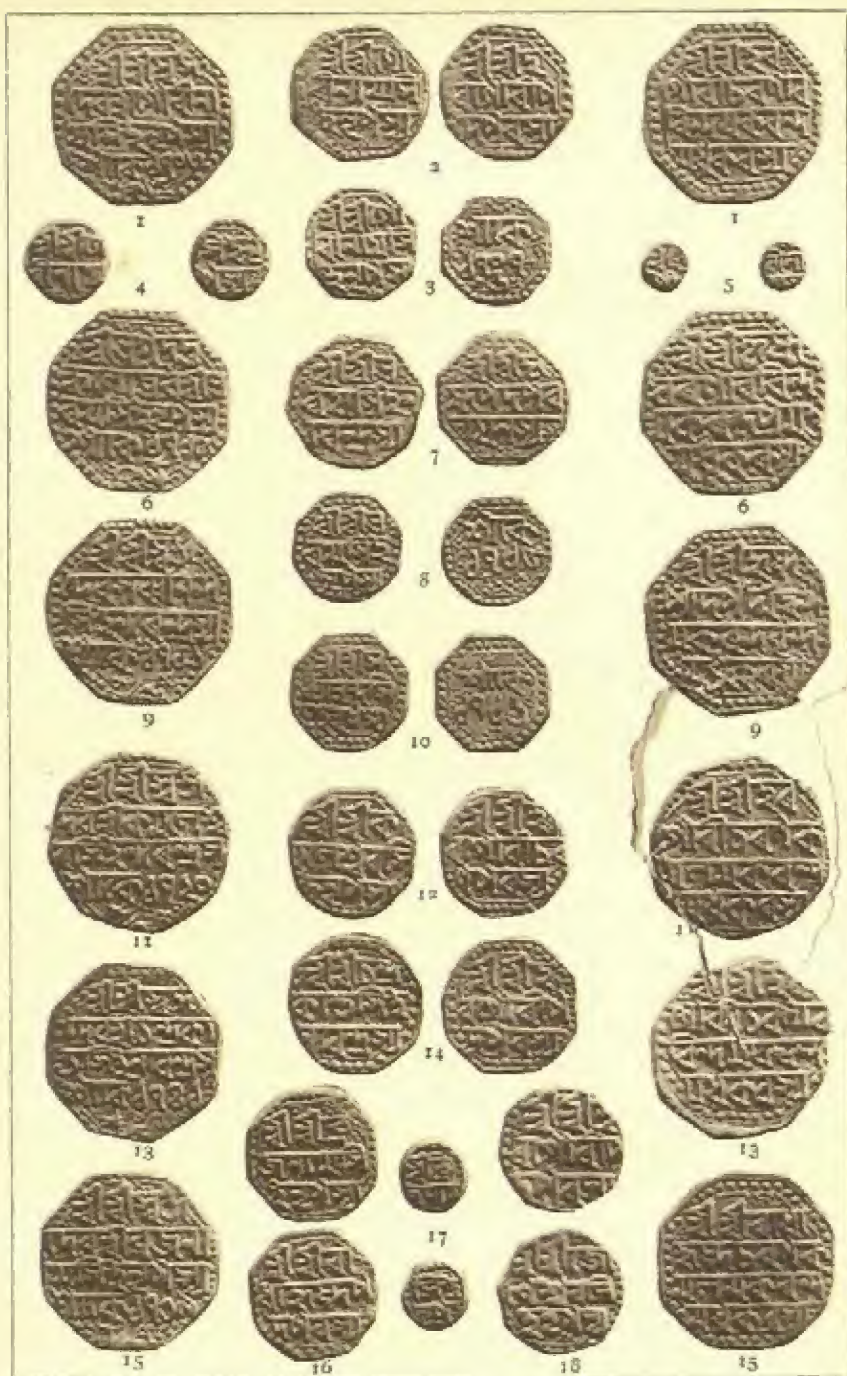


MARCO MANTOVA BENAVIDES



COINS OF ASSAM





COINS OF ASSAM



XVII.

THE FIFTH-CENTURY COINS OF CORINTH.

(See Plates XXVI.-XXIX.)

SINCE writing an article on this subject three years ago, in the *Corolla Numismatica*, dedicated by many admirers to the late chief of the Numismatic Department of the British Museum, I have had the privilege of inspecting several additional cabinets which are rich in coins of Corinth. I have specially to give thanks to Doctor Regling, of the Berlin Kaiser Friedrich Museum; to Doctor Svoronos, of the National Numismatic Museum at Athens; and to Mr. Cockayne, of the Fitzwilliam Museum, Cambridge, for kindly placing at my disposition casts of unusual varieties, which had not come under my observation when I was writing in 1906. The result of my later investigations does not in any way contradict the scheme of dates and periods which I laid down in the *Corolla*, but it adds several subdivisions. Some of them raise points of difficulty, and I am quite aware that several of my details of arrangement are liable to criticism. But in the hope that the collection of this series of types and varieties may, at least, lead to some advance in our knowledge of the little-studied Corinthian coinage, I have ventured to commend this paper to the editors of the *Numismatic Chronicle*.

I. THE LATEST ARCHAIC CLASS.

Considering the enormous number of Corinthian coins which exist, the student is always surprised, when he sets to work to arrange chronologically the series in any Museum, at finding what a small proportion of them seems to belong to the central years of the fifth century B.C. The pieces of obviously transitional style, which class themselves by their aspect as belonging to the period 480-430 B.C., are very few—only the four sets of types (in fact) which I have styled Classes II., III., IV., V., in this article. They are all scarce, and some of them are rare in the highest degree (*e.g.* the types (*b*) and (*c*) of Class V. seem unique). Yet Corinth was still the second commercial state in Greece from 480 B.C. down to her defeats by the Athenians at Cecryphaleia and Aegina in 458. And if she was in a somewhat depressed condition from 458 until the break-up of the Athenian land-empire in 447-6, she recovered her position to a great extent after the "Thirty Years' Peace" of 445, and from that date down to the outbreak of the Peloponnesian War in 431, she was strong enough to dispute the commercial supremacy of Athens in Western, if not in Eastern waters. Indeed, the ultimate cause of the Peloponnesian War itself, as modern historians have repeatedly pointed out, was not so much the latent rivalry between Sparta and Athens, as the resentment of Corinth—Sparta's most powerful and faithful ally—at the invasion of her Western sphere of influence, in which her power had never before been seriously challenged, by the restless Athenian democracy. How great her ambitions were, and how strong her power, as chief of a confederacy of daughter-cities, was shown by the series of

events connected with Coreyra and Epidamnus, which filled the years 435-432, and led to the actual outbreak of the Peloponnesian War.

There is no reason, therefore, to expect to find a deficiency of Corinthian issues in the period 480-430, save perhaps during the few years 458-447, when the unsuccessful war with Athens might have caused a temporary deficiency at the mint. But even such a deduction as this last would be dangerous; for periods of unsuccessful war often lead to lavish rather than to restricted coinage, when all the wealth of the state is being poured through the treasury for military purposes.

But as a matter of fact, while there are copious issues of Corinthian staters which belong to the later archaic period, and series hardly less numerous (my Classes VII. and VIII.) which must clearly be ascribed to the last years of the fifth century—the second half of the Peloponnesian War—the transitional style is represented by only a few emissions, and the individual coins of each of these emissions are more or less scarce.

There can only be one plausible explanation for this phenomenon. Corinth, like Athens, must have gone on for many years reproducing its archaic types, for commercial purposes, instead of keeping the art of its mint up to the level of the last improvements, in the way that Syracuse and many other important states were doing at this time. I should incline to the idea that most of the archaic issues of Corinth, which have a large broad incuse square around the head of Pallas, and in which the head itself is small and delicately executed, belong to a date rather later than that to which the character of their art would assign them. This is rendered more probable by the fact that one or two of the varieties of this sort bear

symbols behind the head, which must be either mint-masters' badges or at least distinguishing marks of some period of mint administration. These symbols are rare, but the British Museum collection shows one specimen, with apparently a letter \times (Brit. Mus., *Corinth*, Pl. ii. No. 4), and the Fitzwilliam another, with a small crescent [see PL XXVI. No. 3 illustrating this article]. Yet the coins with these symbols do not seem to be any later than some others of the late archaic issues, which have no such additions behind the head of Pallas. A glance at the three pieces selected to illustrate the issues of this period in PL XXVI., shows at once that No. 3, the coin with the crescent symbol, is (if anything) less advanced in style than No. 1, and most decidedly inferior as a work of art to No. 2, which is the most delicate and beautiful of all the archaic pieces of Corinth. Only the eye drawn out of perspective, in the ancient fashion, differentiates this last stater from work of the best transitional style. Evidently the artist was being archaic of set purpose, and could have done much better if he had pleased.

It will be noted that in all the coins of this period the obverse, the Pegasus, is much inferior in style to the Pallas head of the reverse. The beast is in no way superior in execution to that displayed on the earliest coins of the archaic period, which must go back to before the year 500 B.C. Evidently it was considered more necessary to keep the Pegasus rigorously similar to the original type than the bust of the goddess. It was this badly drawn, big-headed, short-legged creature which was known all over the commercial world as the badge of Corinth. As we shall see, the unwieldy animal continues to be reproduced during the next period, that of the real

transitional issues, still unchanged, even when the Pallas of the reverse has been entirely modified into a more modern and refined type.

The easiest way to identify the late issues of the archaic series, with which we have been dealing, is to note that they bear the letter ϕ on both sides, not only beneath the Pegasus as usual, but also behind the head of Pallas.

PERIOD II. EARLIEST TRANSITIONAL SERIES.
Circ. 451-448 B.C. (?)

The sudden break in the Corinthian series, between the coins which continue to copy the archaic Pallas head, though in a refined style, and those which introduce the first new types of the portrait of the goddess, must probably be placed about the year 455-450, and may synchronize, perhaps, with the "Five Years' Truce" of 451. Corinth, beaten in her first struggle with Athens, and deprived of all her Eastern trade, may probably have revised her mint arrangements about this time.

The archaic Pallas head, found on all previous coins, had been distinguished by the back hair being arranged in a long queue, falling down to the nape of the neck, while the front hair was dressed in one or more knobby curls on the temples. There was always a necklace of beads round the throat.

But there came a complete change in every detail when the first transitional Pallas was portrayed. In the middle of the still well-marked incuse square we find a very severe head of an almost masculine type, with little hair visible, for it has been drawn up and tucked under the helmet, so that nothing is to be seen of it save a narrow

band behind the ear. Feminine adornments are wholly wanting, for there is no necklace and no ear-ring. If we were not sure that this was Pallas, we might have taken her for a young beardless Ares. This first transitional stater is extremely rare : of decent specimens of it I only know the one illustrated as **Pl. XXVI. 4**, in my own collection. There were no others in any of the cabinets that I have seen.

Slightly later than this piece comes the second variety of earliest transitional stater, illustrated here by two coins, one (a remarkably brilliant specimen) from Berlin, the other from Athens [**Pl. XXVI. Nos. 5 and 6**]. These show a head of a severe type of beauty, but one less masculine than the last. They have a little hair apparent in front of the ear, and also give Pallas both a necklace of beads and an ear-ring composed of a straight bar with three small pendants hanging from it. The apparent symbol behind the head on the Athens specimen [**No. 6 of Pl. XXVI.**] is only the result of a plugged hole in the original. There are no symbols on this series, though the next one is differentiated from first to last by such a device.

The Pegasus on the obverse of all these pieces remains absolutely uncouth and archaic, exactly similar to the beast of the latest archaic series.

PERIOD III. SECOND TRANSITIONAL SERIES: TRIDENT-SYMBOL. 448-440 B.C. (?)

The next class is one which must have endured for some few years, and which is much less rare than the last. Not only are there four, or more, types of head belonging to it, but while its earlier pieces have a well-marked incuse square on the reverse, its later ones are

almost (apparently sometimes entirely) destitute of that token of archaism. Moreover, while some of the issues bear the old round-winged Pegasus, which had been copied so slavishly ever since 500 B.C., others introduce for the first time a new type of the beast, with more elegant proportions, and long straight wings, which look far more suited for flying than the short clumsy pinions hitherto credited to the divine steed.

All this class is distinguished by bearing a large symbol behind the head, viz. a trident turned downwards—to be carefully distinguished from the trident turned upwards, which belongs to certain much later (fourth-century) staters, of a quite different fabric and general appearance. The four subdivisions of the trident series which I have been able to discover are the following:—

(a) Head of Pallas to right, the hair in a long queue, as in the archaic series, and ending in a well-marked round tuft; she wears a necklace and ear-rings, both smaller than usual; the incuse square is well marked; the trident behind the head is large. The Pegasus of the obverse is still purely archaic, like that of the last series. The specimen illustrated as No. 7, Pl. XXVI. is a British Museum coin, No. 113 of the Catalogue.

(b) Head of Pallas to-left; the hair drawn up tightly under the helm, as in the coins of Class II. (earliest transitional), and showing very little. The ear-ring and necklace very small; the incuse square well marked; the trident-symbol large. The Pegasus of the obverse, like that of type (a) of this series, is entirely archaic. The coin here illustrated as No. 8, Pl. XXVI. is in British Museum Catalogue, No. 114.

(c) This is an entirely different type, only joined to

the last two by their common trident-symbol. The very beautiful head has long snake-like curls falling from under the helm all down the back of the neck. Pallas wears an ear-ring, but apparently no necklace. The incuse square is well marked.

But even more divergent from all that has gone before than the reverse of this coin is the obverse, where for the first time in the Corinthian series we find the new type of Pegasus. Here all archaism is thrown aside, and we get a beautifully modelled horse, finer in detail than many later issues, with long straight wings, of which every feather is carefully rendered. Three sizes of feathers in three rows are discernible. The creature is flying to right. The specimen illustrated as No. 9, PL XXVI. is from my own collection.

(d) The fourth class is varied from the preceding one by the fact that the reverse has apparently no incuse square round the head of Pallas: this is the first Corinthian stater lacking the incuse. The hair in the specimen shown is shorter than that of the last coin and in smaller locks, but falls on the neck in the same fashion. The trident is smaller, but a little more ornamented. The obverse shows the new type of Pegasus, with the straight wings, but flying to left, not as in the last coin to right. This coin [PL XXVI. 10] is, like the last, from my own collection.

PERIOD IV. LAST TRANSITIONAL SERIES.

440-433 B.C. (?).

It seems strange that we should have to place after the trident series another class which reverts to the old fashion of having no symbols on the reverse, behind the

head of Pallas. But I am constrained to assign this next class to the later date, because the large majority of them have no incuse square, while in the trident series the lack of it is most exceptional, indeed, is only found in **Pl. XXVI. 10**, the last coin catalogued. Moreover, the head on the coins now in question, lacking the incuse square, is of a more modern type than that on any of the trident coins, and the hair is treated in a freer fashion, falling in smaller and much more irregular curls than that of the Pallas in Classes III. (c) and III. (d) above. We have also to note that one of these coins [**Pl. XXVII. 12**] bears a modification of the headgear of the goddess which is absolutely new, though it is about to become in a few years normal, and to persist down to the end of the Corinthian coinage. On comparing **Nos. 11** and **12**, it will be seen that the Pallas on the latter (though absolutely similar to the former in other respects) wears under her helmet a neck-guard, apparently of leather, curling outward and protecting the nape. This piece of armour is as yet quite small, but is destined to grow much larger on later issues.

Yet these very fourth-century-looking staters have, strange to say, a Pegasus on their obverse which takes us back many years, to the earliest coins of the trident series, since it is absolutely uncouth and archaic, and resembles the beast on coins such as **Pl. XXVI. 7, 8**. A glance at the illustrations [**Pl. XXVII. 11, 12**, the former from the Athens Cabinet, the latter from the British Museum (Catalogue No. 115)] will show that there is an ostensible difference of at least forty years between the style of the obverse and reverse of these pieces. Were old obverse dies being used up on some emergency?

Only one of this series of coins without a symbol has

the incuse square [Pl. XXVII. 13], but lest we should be tempted by the reappearance of the incuse to put this coin too early, we find on its obverse the modern straight-winged Pegasus like that of Pl. XXVI. 9, 10. Indeed, this piece closely resembles the former but for the want of the trident-symbol, and must be placed very close to it in the chronological sequence, owing to that resemblance. The very fine specimen here illustrated is from the Fitzwilliam Museum.

PERIOD V. MUREX CLASS. 433-431 B.C. (?)

I am constrained to place here three abnormal coins, two from the Berlin Cabinet and one from the British Museum, of which no second specimens have ever come under my notice. Two of them must be placed in close connexion with the coin Pl. XXVII. 12, in the last series, since they display the neck-guard under the helmet of Pallas, which was first introduced to our notice by that exceptional piece. But they both show a well-marked incuse square, which Pl. XXVII. 12 completely lacks. The incuse is just about to disappear, only one more coin in our catalogue after Series V. displays it, viz. No. 1 of the palmette series (Period VI. No. 17). The head of Pallas in these two Berlin coins now under consideration is markedly similar to the last-named piece, as can be seen at a glance. I cannot doubt that all three belong to the same date, and must be placed somewhere about the beginning of the Peloponnesian War. Can the laurel-wreath which encircles Pallas's head in the third specimen possibly be an emblem of triumph for the great naval victory at Sybota over the Coreyreans in 432 B.C.?

The coin must have been struck very close, at any rate, to that year.

The third piece which I have to place in this rather abnormal section is a British Museum coin, No. 383 of the Brit. Mus. Catalogue,¹ on which the Pallas's head is markedly similar to the third coin of the class immediately preceding this series [Pl. XXVII. 13]. But behind the neck is a cockle-shell, while under the archaic Pegasus of the obverse is a murex-shell, similar to that on the Berlin coin just discussed above, and connecting the two together. Since this stater is connected with Class IV. 13 by its reverse, and with V. 15 by its obverse and symbol, we must place it close to 430 B.C. It should be noted that, like all the coins which precede it (save IV. 12), and unlike all the coins which are to follow it, this coin has no leather neck-guard to Pallas's helm. We must, therefore, arrange the three coins as follows:—

V. (a) and (b). Symbol : murex.

(a) *Obv.*—Archaic Pegasus with curled wings, flying to l.; below, murex; in front, Φ (barely visible).

Rev.—Head of Pallas to l., *without* neck-guard, exactly resembling Type IV. (c), but with a cockle-shell behind the neck; all in an incuse square, barely visible, but still certain.

[Pl. XXVII. 14.]

(b) *Obv.*—Similar, but the anatomy of the Pegasus is more correct, and its shape more pleasing than in (a); below, murex; in front, Φ .

Rev.—Head of Pallas to r., wearing leather neck-guard; behind, Φ ; all in well-marked incuse square. There is a deliberate attempt at archaism in the drawing of the eye, which is

¹ I cannot discover the Ξ mint-mark attributed to this coin in the Brit. Mus. Catalogue, and suspect the supposed letter to be a fault in the die merely.

contradicted by all the other details in this coin, which are of advanced style, especially the hair, which much resembles in arrangement that on the next coin. [Pl. XXVII. 15.]

(c) Symbol : wreath round helm.

Obv.—Pegasus of the modern type, with straight wings, flying to l.

Rev.—Head of Pallas to l., wearing a large laurel wreath round her helm, and a leather neck-guard below it; the hair curls freely from under the neck-guard; all within a well-marked incuse square. A very beautiful coin, of the best early-fine style, and evidently struck not far from the year 430 B.C. Like the last, this piece comes from the Berlin Cabinet. [Pl. XXVII. 16.]

PERIOD VI. PALMETTE CLASS. *Circ.* 431–414 B.C.

This is the first class since Period I. of which it can be said that specimens are fairly numerous. It may be added that they form a very beautiful series, as charming as any that the Corinthian mint ever issued. They must have been struck during the earlier years of the Peloponnesian War, but it is impossible to guess the meaning of the palmette-symbol, which is their distinguishing mark. The earliest variety, which is much less common than the later, has a well-marked incuse square on the reverse. This is the last occasion of its appearance: tentative issues without it had already appeared some time back—IV. (a) and (b) and III. (d). All the coins show the neck-guard below Pallas's helmet, and all have the modern straight-winged Pegasus on the reverse.

(a) *Obv.*—Straight-winged Pegasus flying to l.; below, Φ .

Rev.—Head of Pallas very similar to that of V. (c), but with no wreath round the helmet; large neck-guard; behind the head, symbol palmette; all in a well-marked incuse square. The beautiful coin here illustrated, the finest of the type that I have seen, comes from the Athens Cabinet.
[Pl. XXVII. 17.]

(b) *Obv.*—Similar Pegasus flying to l.; below, Φ .

Rev.—Head of Pallas of advanced style, with large neck-guard to l.; no incuse square; behind the head, large palmette. Two specimens shown [Pl. XXVII. 18, 19], both from British Museum, Nos. 155, 156 of its Catalogue.

PERIOD VII. THE CIRCLE OF DOLPHINS CLASS.

414-412 B.C.

It is, I grant, quite arbitrary to connect the palmette-symbol with the Spartan alliance, though it undoubtedly was being used by a long series of Corinthian mint-masters during the period when the Spartan alliance was strong, in the first decade of the Peloponnesian War. But I think that there is something more convincing and less hypothetical in connecting the next great change in the type of the Corinthian coinage with the Syracusan alliance of 414, which made such a landmark in the history of the war. When the Athenians took in hand their great Sicilian expedition in 415, it was Corinth's Western trade quite as much as the independence of Syracuse, which was at stake. Hence came the eagerness with which her citizens aided Gylippus in sending succours to Sicily, and the prominent part taken by Corinthian captains in the naval operations in and about the Great Harbour of Syracuse. When the Athenian expedition

came to its disastrous end, we cannot doubt that the Corinthians both credited themselves with their full share in the victory, and also manifested an enthusiastic friendship for their Syracusan kinsmen. This must have risen to its height when the triumphant Hermocrates brought over his squadron of twenty-two Sicilian galleys to join the Peloponnesian fleet that renewed the great struggle with Athens in 412.

It is impossible not to connect with the Syracusan alliance and the years 413-12, the appearance on the Corinthian coinage of the characteristic Syracusan type of the circle of dolphins surrounding the Pallas's head, on the reverse of a certain short series of staters, whose art shows clearly that they belong to the later years of the fifth century. This orle, or border, of fish was a device utterly unknown on the coinage of Greece proper, whereas it had been, ever since the year 495, the regular type of all the Syracusan issues. When, therefore, we find it suddenly appearing at Corinth, we may be certain that it was introduced as a compliment to Syracuse, and as a mark of the close alliance with that state which had recently been established. There are four separate varieties of these coins, all of much the same style, and obviously dating from the same two or three years. They are—

(a) *Obv.*—Straight-winged Pegasus, of high relief and fine style, flying to l.; below, Q.

Rev.—Head of Pallas to l., within a border of four dolphins: the head is of a square and rather ugly type. Behind the very large leather neck-guard below the helm are the letters Δ.

[Pl. XXVIII. 20, Brit. Mus. coin, No. 359.]

(b) *Obv.*—Similar, but Pegasus less well drawn and in lower relief.

Rev.—Head of Pallas of weaker style, but more graceful outline, within a border of three, four, or five dolphins.

[Pl. XXVIII. 21. Cf. Brit. Mus., Nos. 151, 152.]

(c) *Obv.*—Straight-winged Pegasus walking to l. on a line, with his right fore-foot raised high in a stepping attitude; below, Q.

Rev.—Pallas's head of similar style to the last class, within a border of three dolphins; no letters or symbol behind the head.

[Pl. XXVIII. 22. From the Berlin Cabinet.]

(d) *Obv.*—Pegasus with short curled wing walking to l.; below, Q.

Rev.—Pallas's head of style similar to the last two coins, within a border of four (! owing to bad striking only three are visible) dolphins.

[Pl. XXVIII. 23. From the Athens Cabinet.]

The walking Pegasus on types (c) and (d) is a new feature in the Corinthian coinage. That on type (c) was never reproduced again; but the curled-winged Pegasus of type (d) was repeated for a series of years during a later mint-period (see Nos. 30, 31, 32, 33 in Pl. XXIX., which illustrates Period IX.). Why a recrudescence of the rather ineffective curled-wing should set in, after it had been banished for more than twenty years from the Corinthian mint, we cannot say. But it looks as if this figure of Pegasus was directly copied from some ancient and much-venerated work of art. This is the easiest way of explaining the rejection of the much more pleasing type with the straight wings during part of this period.

PERIOD VIII. PALMETTE AND SINGLE DOLPHIN
CLASS. 411-404 B.C. (?).

After the circle of dolphins which marked the Syracusan alliance had prevailed for a very few years, it was disused. But in memory of it a single dolphin in the field of the reverse, facing the head of Pallas, was retained for a considerable period. At the same time, the palmette-symbol, which had been the distinguishing mark of the earlier years of the Peloponnesian War and of the Spartan alliance, was restored. This combination of dolphin and palmette seems to mark the fact that Corinth is now continuing the war against Athens in equal combination with Sparta and with Syracuse. There are four types at least of staters of this period, differentiated by the attitude of the Pegasus on the obverse. It may be noted that the size and detail, both of the palmette and of the dolphin, vary materially between coin and coin. The four types are—

(a) *Obv.*—Straight-winged Pegasus flying to l. ; below, Q.

Rev.—Head of Pallas to r. ; in front, a dolphin ; behind, a palmette.

Three illustrations are given, **Pl. XXVIII. Nos. 24, 25, 26**, to show the varying size of the symbols. **Nos. 24 and 26** are in *Brit. Mus. Catalogue*, coins **Nos. 157 and 158**. **No. 25** is from my own collection. The first has a very large, the second and third a very small, dolphin.

(b) *Obv.*—Straight-winged Pegasus standing on a line to r., clapping his wings ; below, Q.

Rev.—Head of Pallas to l. ; in front, a dolphin ; behind, a palmette placed diagonally (not horizontally, as in other varieties of this series).

[**Pl. XXVIII. 27.**]

This is No. 160 of the *Brit. Mus. Catalogue*.

(c) *Obv.*—Straight-winged Pegasus to l.; throwing himself backward as if jerking against the bridle, with his fore-legs set much forward; he flaps his wings, as on the last coin. No line below; Q as usual.

Rev.—Head of Pallas to l.; behind, a very large palmette placed horizontally; in front, a dolphin (not visible in the cast, owing to bad striking).

[Pl. XXVIII. 28.]

This coin, of which I have never seen another specimen, is in my own collection.

(d) *Obv.*—Curled-winged Pegasus walking to l.; on a line below, Q.

Rev.—Pallas's head with dolphin and palmette, similar to the last coin.

[Pl. XXVIII. 29.] In my own collection.

Observe the reappearance of the walking Pegasus with curled wings, hitherto seen only on No. 23 in Period VII. But it is about to become common while Period IX. is running.

PERIOD IX. DOLPHIN AND VARYING ANNUAL SYMBOLS. 404-394 B.C. (?).

Somewhere about the end of the Peloponnesian War, the palmette-symbol, which has been running ever since the year 430, and apparently bid fair to become a permanent adjunct of the Corinthian stater, drops out. On the other hand, the little dolphin in the field, which has been accompanying the palmette of late, continues to be used for another ten years. It would be tempting to regard this lapse of the palmette as a token of the estrangement of Corinth from Sparta, after their long alliance against Athens, 431-404. We know that there was grave dissatisfaction at Corinth against her old ally the moment

that her old enemy had been disposed of. But since we have no warrant for regarding the palmette as a mark of the Spartan alliance, any deductions would be dangerous. Possibly some party went out of power at Corinth about 403, whose successive mint-masters had been using the palmette as a distinguishing mark of their administration. Whether the perpetuation of the dolphin implies any continued regard for Syracuse, it is hard to decide, since that state had practically withdrawn from the anti-Athenian alliance in 409, when it recalled its contingent from the Aegean. Yet the dolphin continues for a space longer, apparently till the end of the Peloponnesian War in 404.

There are three main classes in the issues of this period, marked by the attitude of the Pegasus on the obverse. In the first set he is a curled-winged creature, walking along a line, as on the last coin of the preceding period (VIII. 29). In the second he is a straight-winged horse, flying to left, as in most of the coins of Periods VI. and VII. In the third we have a perfectly new type; Pegasus is lowering his head to drink, no doubt from the spring of Peirene on the Acropolis: he is straight-winged in this variety, which must surely, like the type already mentioned as VII. 23, be taken from some well-known statue.

On all the coins belonging to the first two of these classes there is a symbol behind the head of Pallas in addition to the dolphin in front of it, and the varieties of these symbols are so numerous that we cannot doubt that they are the mint-marks of magistrates, changed at least once a year. A few pieces have beside, or in place of, the symbol, a letter, or several letters. One coin, **Pl. XXIX. 30**, from the Paris Cabinet, has two dolphins, and apparently no second symbol. Was the mint-master's

badge a dolphin? Or does this coin link Period IX. to the circle of dolphins series of Period VII.?

(a) *Obv.*—Curled-winged Pegasus walking to l. along a line; below, Φ . The animal is in very high relief, and much more thickly built than the similar Pegasus in Class VIII. (d); he much more resembles that of Class VII. (d).

Rev.—Large head of Pallas to r., or less frequently to l.; in front, a dolphin; behind, a varying symbol such as dolphin [Pl. XXIX. 30], eagle's head [Pl. XXIX. 31], bunch of grapes [Pl. XXIX. 32], thymiaterrion and ivy-branch [Pl. XXIX. 33], or figure of Poseidon. There are probably other symbols. All the heads of Pallas are of a large but rather ugly type. The three last coins illustrated in the plate are those catalogued in the British Museum, Nos. 162, 163, 164; the first, No. 30, is from Paris.

(b) *Obv.*—Straight-winged Pegasus flying to l.; below, Φ .

Rev.—Head of Pallas, of smaller size and more pleasing style than those of Class (a), to l.; in front, a dolphin; behind, a varying symbol, cock [Pl. XXIX. 34], letter Σ [Pl. XXIX. 35], head of pistrinx, thymiaterrion and ivy-branch, figure of Poseidon. These are respectively the British Museum coins Nos. 153, 154, 165, 172. There are probably other symbols. Of the coins shown, No. 34 is from the Museum, No. 35 is from my own collection.

It will be noted that in two cases the same mint-master used both types of Pegasus during his term of office. The symbols of the archaic Poseidon, and the thymiaterrion and ivy-branch, are found associated both with the curled-winged and with the straight-winged Pegasus.

(c) *Obv.*—Pegasus with straight wings to r., in the attitude of bending forward to drink; below, Φ .

Rev.—Head of Pallas to l.; in front, a dolphin; behind, a large rose and the letters EYB.

[Pl. XXIX. 36, Brit. Mus. Catalogue, 345.]

The interest of this last coin resides not only in the hitherto unprecedented type of its obverse, the drinking Pegasus, but in the fact that the very die used in striking the stater pictured here is the same as that which was employed on a coin where the dolphin-symbol on reverse does not occur, and which, therefore, belongs to an entirely different series. I have reproduced the second coin as **Pl. XXIX. 37**, that the identity of the two dies may be noted. The reverse symbol of the second coin is a naked archaic Zeus, holding a sceptre and thunderbolt. The two coins are both in *Brit. Mus. Cat.*, as Nos. 169a and 345. It seems clear that the later coin, without the dolphin-symbol on reverse, must be regarded as the first of the long series of staters, extending far into the fourth century, which bear the symbols of the annual magistrate only, without any such addendum indicating the general period as the palmette, trident, or dolphin of the elder classes that we have been investigating.

CLASS X. ANNUAL MAGISTRATES WITH VARYING
SYMBOLS. 394-338 B.C. (?).

Beyond giving the coin last mentioned, I do not purpose to go further into the long series of coins of the period of the finest art, bearing the symbols, and sometimes also the initials, of the annual magistrates. The change in system at the Corinthian mint must have synchronized pretty closely with the great break in the foreign policy of the state, when in 394 it openly quarrelled with Sparta, and allied itself with Thebes, Argos, and Athens in the so-called "Corinthian War," which lasted down to the peace of Antalcidas in 387.

With the arrangement of this difficult and complicated series, which fills up the greater part of the fourth century, I may, perhaps, venture to deal in another article at some later date.

But I have one final difficulty to discuss, viz. the placing in the chronology of the Corinthian mint of a small series of staters which has caused me much searching of heart—that on which Pegasus is represented standing tied up to a large ring by his bridle.

CLASS OF UNCERTAIN DATE. PEGASUS ATTACHED TO
RING. POSSIBLY 421–419 B.C. (?).

The difficulty concerning this series may be set forth thus: It is a class extending over more than one year, since different coins belonging to it have at least three symbols, presumably those of different annual magistrates. They are—

- (a) Aplustre behind head on reverse.
- (b) Palm-branch in front of head on reverse.
- (c) ΕΥ and a tripod, or ΕΥΤΥ on each side of head on reverse.

The obverse of all three varieties is exactly similar, representing a Pegasus with curled wings standing to right, tied up by his bridle to a large ring, presumably fixed in a wall, though no wall is indicated. He is of a stout build and rather archaic type, resembling the beasts on coins 23, and 30, 31, 32, catalogued above.

The reverses, however, have several varieties. On the sub-class (a) we have a Pallas's head to right with an aplustre behind; on sub-class (b), the head is to left,

with a palm-branch in front; of sub-class (*c*) there are two varieties, in one case the head looks to left, with a tripod behind, and ΕΥ on each side; in the other the same magistrate's name is indicated at greater length as ΕΥΤΥ (Eutyclus or Eutyclus, no doubt) without any tripod. These two last coins cannot be separated, as the head is exactly similar in style and shape, though to the left in one case and to the right in the other. In the illustrations to this article, (*a*) is **No. 38**, from a coin of my own, but there is an inferior specimen in the Brit. Mus. Catalogue, No. 147; the coin representing (*b*), **No. 39**, is from the Berlin Cabinet; that representing class (*c*) is Brit. Mus. Catalogue, No. 340.

It must be confessed that while the obverse of each of these coins is a handsome subject, the reverse is eminently unpleasing. We have an ugly mean type of face, neither precisely archaic nor precisely modern in character, but between the two. It bears, however, a resemblance to certain heads in series already discussed: in (*a*) and (*b*) it may be compared with the very unsatisfactory Pallas on coins **20** and **22** of Period VII., while (*c*) is more like **No. 31** of Period IX.—all unpleasing heavy faces.

Taking the style of the Pegasus and that of the Pallas together, I should, putting all historical conclusions aside, be inclined to guess that the series ought to belong to some date close to Series VII., the set with the four dolphins, which I have ascribed to the Syracusan alliance and the years 414–412. If it came after that class, it would have the dolphin, as shown in Series VIII. and IX., on its reverse, which is not the case. It seems preferable, therefore, to put it *before* Series VII., *i.e.* in the years preceding 414.

In this hypothesis we might find a meaning for the fact that Pegasus is chained up to a ring. With all diffidence I venture to suggest that the national badge is tied up because he is not allowed to go forth to war, *i.e.* peace has set in, and he may stay at home. The allusion would be to the peace of Nicias in 421, when Corinth, under Spartan pressure, concluded an uneasy truce with Athens, which was to last for the seven years 421-414. This interpretation is, I admit, wholly fanciful, but it is worth suggesting. Taking it for granted, we should say that the palmette-symbol, which marks the early years of the Peloponnesian War and the Spartan alliance, has vanished, only to reappear after 412, when the old conditions have been renewed, and war and alliance have been resumed. So Pegasus is tied up, perhaps, because he is unwillingly restrained. Corinth signed the truce with great reluctance, because Sparta insisted on it.

All this may be said to be more ingenious than convincing. I only give the guess for what it is worth, and I grant that much may be said against it. The objection that the magistrate's name, ΕΥ or ΕΥΤΥ, is placed in a time when magistrates had not yet begun to sign their coins, may be parried by the answer that a similar signature ΙΔ (Idas? or some such name) appears on the first coin of Series VII., in an equally abnormal way. But there is a harder objection. The coin (c) with ΕΥ and tripod, is hard to separate from two other coins (Brit. Mus., Nos. 339 and 340) which have also ΕΥ and tripod, with a Pallas's head very similar to that of the coin now discussed. Yet it seems difficult to move these out of the class of ordinary staters of the period after 394, when a symbol and a magistrate's name put together

were normal. If we have to move them forward to 421-414, they would carry several other coins with them, and break the *catena*. I leave the discussion to the select few who are interested in the history of the Corinthian coinage.

C. OMAN.

XVIII.

THE "MEDALLION" OF AGRIGENTUM.

(See Plate XXX.)

A DISCUSSION has lately been going forward in the pages of *Le Musée* concerning the authenticity of the celebrated decadrachm of Agrigentum, in the Royal Collection at Munich, and as the subject is one of exceptional importance, and the Parisian Art Journal being comparatively little read by English numismatists, our readers will be interested in the following account.

Monsieur A. Sambon, the editor of *Le Musée*, had, in the February number, 1908, expressed strong doubts of the authenticity of *all* known examples. He characterized them as "creations of the beginning of the XVIIIth century," and alleged the following reasons against their genuineness: The want of the exergual line below the quadriga. An "affected violence" in the action of the horses, and a defective arrangement of their legs. An irrational position of the chariot, a portion of which is, he says, wanting altogether, the charioteer standing on the axle-tree, while his garment envelops him like a scarf. The crab is said to be badly drawn, and to seek an escape from the approaching chariot. The lettering he pronounces to be hesitating. The rock under the hare is described as giving the impression of a heap of "crushed linen."

This bold condemnation of one of the most precious of Greek coins caused something in the nature of a sensation among numismatists.

In the August number, 1909, of *Le Musée*, our Fellow, Mr. E. J. Seltman, addresses a letter to Monsieur Sambon, which we give below.

After a few introductory remarks, the writer proceeds as follows:—

“I may as well begin by saying that I have always believed in the authenticity of the coin at Munich [Pl. XXX. 1], and that I believe in it as much as ever. Of the others I only know the two at Paris, and I agree with you in thinking them false. One of them—a struck coin [Pl. XXX. 3]—is of so coarse a fabric that it easily betrays itself as the work of a forger. The other [Pl. XXX. 2] (the second coin figured on page 10 of the *Bulletin Numismatique*) is a cast from a genuine coin at present unknown, or possibly lost—and I may add here that I have, within the last month, heard through an expert of the existence of another ‘medallion’ of Agrigentum, although he did not choose to reveal the owner’s name.

“You pointed out to me the other day, that the condemnation of the Paris coin would involve that of the one at Munich, because the chariot side of both pieces came from the same die; only, that the former had been struck with the faulty legend ΧΚΡΑΓΑΣ, and the latter from the corrected die. When I, subsequently, examined the Paris coin, I was struck by its suspiciously ‘fishy’ look. The supposed x seemed to me more like a casting flaw than a letter—quite as much, in fact, as the apparent Λ behind the head of the charioteer. When I had secured a cast of it, I first ascertained, by careful comparison with a cast of the Munich coin, that the Paris decadrachm—

if struck—must have been struck from the same die as the other. Then I took a pair of compasses, carefully measuring the distances between certain points on both coins. The results are as follows:—

	Pl. XXX. 1. Munich.	Pl. XXX. 2. Paris.
From tip of eagle's beak to tip of crab's right claw:	31·5 mm.	30·7 mm.
From tip of driver's nose to tip of fourth horse's hoof:	28·2 mm.	27·5 mm.
From tip of fourth horse's ear to root of first horse's tail:	28·5 mm.	27·8 mm.
Etc., etc.		

"In carefully measuring these distances on the photographs of both coins in the *Bulletin Numismatique*, you will get the same results. There is, therefore, not the shadow of a doubt that the Paris coin is a cast, having undergone the inevitable shrinkage after it left the mould.

"But to return to the coin of the Museum Collection at Munich—as regards the general *habitus* and look of the piece, I submit that it fulfils all requirements. The formation of edge and flan appear to me perfect in all respects. The lettering, too, is definite and strong, as it should be. The second letter in the legend was accidentally placed a little too low by the engraver. But is it likely that a forger would choose to invite suspicion by purposely misplacing it? Considerable portions of the surface of the coin are covered with a fine, but durable, coating of oxide of a delicate grey tone of colour. I have not met with such a coating on a false silver coin yet. In cases that have come under my observation imitations consisted either of a hard and coarse crust, or the coating was applied superficially and could be easily removed. Of the coin at Munich a very great number of

impressions have, as I am informed by the Director of the Royal Collection, been taken in the course of the many years during which it has been one of the principal ornaments of the Bavarian Museum; yet this covering remains unimpaired. And its genuineness is supported by another, though apparently slight, circumstance. For in one spot, at the top of the nearer eagle's wing, the surface has yielded to corrosion and broken down. The tiny pit produced there is of that delicately edged and convincingly irregular shape which results from a slow natural process—not from artificial means. It becomes, unfortunately, blunted even in the best cast.

“Let me now apply the test of style by comparison with other contemporary coins of the Agrigentum mint. The excellent reproductions in Hill's *Coins of Ancient Sicily* will serve the purpose. On Hill's Pl. vii. we find two tetradrachms, Nos. 17 and 18 [Pl. XXX. 4, 5], of the same period. The latter, bearing the name of Straton, has the type of the two eagles, like our medallion. The design and work are alike in both, except that the rock under the hare happens to have a more elongated shape on the smaller coin. The eagles might appear at first sight rather less delicately drawn and finished on the larger piece. But careful observation shows that this is simply due to the larger scale of the drawing, and if I use a magnifying-glass, thereby increasing, to the eye, the tetradrachm to the size of the decadrachm, the workmanship on both coins appears identical. The beauty of this design has perhaps been somewhat overrated. At least, I must confess to a preference for the single eagle type as shown on Hill's Pl. vii. coin No. 16 [Pl. XXX. 6]. In looking at the figure of Akragas on the other side of the coin, I am immediately struck by the unmistakable

likeness of his features to those of the charioteer on coin **Pl. XXX. 5**, and I recognize the same cast of features in the Scylla of the other coin [**Pl. XXX. 4**]. Should we put all this down to chance? Should we not rather conclude that the dies for these pieces were made by the same artist?

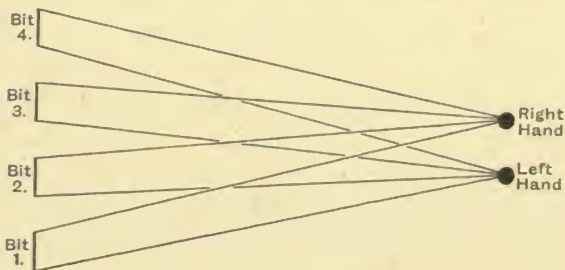
"I understand you to suggest that this medallion may be the work of an engraver of two hundred years ago. It might, thus, after having been evolved as an original conception, have been produced without direct intent to deceive. To this there would be, of course, the objection of the weight, which is that of an Attic decadrachm, or piece of fifty litrae. This consideration brings me to the matter of internal evidence in favour of the medallion, and I will ask your leave to add a few remarks from that point of view.

"I have just ventured to say that I am not very much impressed by the artistic merit of the group of eagles. I admire, however, the design of the quadriga; indeed, I can recall no coin on which the subject of the race is treated with equal power and truth. On smaller coins the designs of racing chariots had, through incessant repetition, become rather conventional. Besides, the smaller field would cramp the designers of so complicated a subject. There are, however, a certain number of coins of the fine period which show, though less perfectly, the characteristic action of turning the horses. To make my meaning clear, you must permit me to touch on some elementary points, by clearly bringing before the reader's mind how a Greek charioteer guided his 'four-in-hand.'

"The ancients, so far as we know, had not discovered the method of joining several reins into one. But their reins were, of course, shorter and lighter than those of a modern 'four-in-hand' with its one pair of horses placed

before the other pair. Still, the charioteer 'had his hands full,' since he held four reins in each hand. In the left he gathered those attached to the left side of each horse's bit, and in the right hand those of the right side. Thus the reins—except the left one of the left and the right one of the right horse—would lie across one another, as is shown in the drawing below. The natural impulse would be, I suppose, to gather the left reins in the left hand first, and over them those with the right, the free use of the apter hand being reserved to the last moment,—as in the drawing.

"All this takes place as the driver steps into the



chariot. The body of such a chariot, when the sport had become highly developed, would, I dare say, be constructed with due regard to lightness, thereby increasing its mobility and speed. It need have been nothing larger than a roomy kind of slipper for both feet, with a rest-board in front for the driver's knees. Being slight and small, it would be hidden from view—as it is on the coin—by the horses' bodies in front. There are only one or two slight curving lines that seem to suggest the body of the chariot.

"Having gathered up the reins, the charioteer poises himself and, slightly leaning back, finds his equilibrium.

With four reins in each hand, he can use neither whip nor goad. The signal is given. He shouts to his horses, shakes the reins, and off the chariot flies. Keeping the balance at highest speed with so slight a support to one's feet cannot have been an easy matter. It would not be less difficult—perhaps more—than the performance of the circus-equestrian who, standing on two bare-backed horses, guides them round the ring at a gallop. The climax of the difficulty is reached at the turning-point, the moment chosen by the engraver. While driving straight the charioteer has kept his hands apart. Now he is about to pull round to the left. This is performed by the left hand with all the four left reins in it, and the guiding pull is carried out by a curving motion of the left hand, in miniature like the curve, and producing it, to be taken by the chariot. That is, the left hand curves towards the right arm with a gradual pull on the left-hand reins, meeting the right arm somewhere under the elbow. The pull acts strongest on the left horse, a little less strong on the next, and so on. The pulling by the left necessitates a corresponding moving forward, and yielding, by the right hand and arm, to prevent the horses' mouths being wrenched too violently.

"All this is shown on the coin, and I do not think it possible for any one but an actual eye-witness to have clearly realized and minutely rendered such detail.

"As regards the want of the conventional line below the horses and chariot, it appears to me the artist did right to omit it. The illusion of the *turning* movement would have been weakened by the addition of a *straight* line.

"There seems to me yet another, and inner, meaning to this type; for just as the Tyche ΜΕΣΣΑΝΑ and the

hero ΤΑΡΑΣ symbolize the Commonwealth on the coins of their respective towns, so does young ΑΚΡΑΓΑΣ (Roscher's *Lexikon der Mythologie*, i. p. 213), worshipped at his city as oekist and son of Zeus and of a nymph of the sea—hence the eagle above him and the salt-water crab below—represent the state and its citizens. The type thus seems a glorification of the community, an apotheosis, as it were, of the state. But ΑΚΡΑΓΑΣ is only mentioned in passing by two comparatively little known, and less read, authors, Stephanus Byzantinus and Aelianus Rhetor, and again the possibility of a forger, be he of two hundred or more years ago, conceiving of—if I may so put it—so 'esoteric' a type is, I venture to think, precluded.

"Dr. Habich of Munich lately made a striking comment from a different point of view in referring to the type as the 'Epiphany' of the divine son of Heaven and Sea."

From a perusal of the above it will be seen that the writer refrains from answering some of Monsieur Sambon's minor objections—presumably because the cumulative force of the argument in favour of the medallion is sufficient to overbear them all.

We may add that we have recently had an opportunity to examine the original coin at Munich, and that we saw no reason to suspect its genuineness.

H. A. GRUEBER.

XIX.

ASPECTS OF DEATH, AND THEIR EFFECTS ON THE LIVING, AS ILLUSTRATED BY MINOR WORKS OF ART, ESPECIALLY MEDALS, ENGRAVED GEMS, JEWELS, &c.¹

PART I.

INTRODUCTION.

DEATH is no unworthy subject for human consideration. Since men began to think, this subject is one that has exercised their brains. Although ignorance may sometimes, perhaps, be bliss, it can hardly be doubted that

¹ A longer, but more correct, title would have been, "The mental attitudes towards the idea of death, and the various ways in which the idea of death has, or may be supposed to have, affected the living individual (his mental and physical state, and especially the direction and force of his actions), as illustrated by minor works of art, especially medals, engraved gems, jewels, &c." Naturally, I have not endeavoured to point out all the possible effects on the living of the various aspects of death as presented by medals, &c. It would, for instance, be quite unnecessary to explain that contemporary medals representing a decapitation for high treason might, at the time when they were issued, have exercised a deterrent influence on those who saw them. *Vide* the medals commemorating the execution of Monmouth and Argyle in 1685, with the inscription "Ambitio malesuada ruit." The "toy-shop" medals (described later on), issued in London on the loss of Minorca in 1756, may actually have played a part in bringing the unfortunate Admiral Byng to his death. In regard to the title, "Aspects of Death," it is scarcely necessary to add that "aspects" must not be regarded as merely equivalent to "representations." On the iconography of death, see Dr. Theodor Frimmel's series of articles in *Mittheilungen d. k. k. Central-Commission . . . der Denkmale*, Neue Folge, Vienna, 1884 to 1890, vols. x.-xvi.; also the works on sepulchral monuments and the various "dances of death" referred to later on.

man's knowledge that every one must surely die has helped to set the race a-thinking, and thinking on this subject has helped to make their lives throughout historic times different to those of all other animals. Few persons, nowadays, would contradict the proposition of Spinoza (*Ethic*, iv. 67), that the proper study for a wise man is not death, but how to live, since a wise man is not guided by the fear of death,² but by his direct desire of the good. Yet, however little a man's everyday active life³ may ordinarily be affected by knowledge of death and thoughts of what lies beyond the grave, I believe that to banish such thoughts altogether, if it were possible, would be to kick down one of the chief ladders by which the race has climbed to its present position. How much, indeed, do we owe to the knowledge of death! How many a good and usefully altruistic action would never have been performed but for this knowledge and the thoughts arising from it! The Death's heads and crosses and every lugubrious *memento mori* of the Middle ages have, indeed, had their use. The subject of the mere aspects of death may perhaps be likened to a time-worn skeleton, but when associated with their possible

² I see, however, that Dr. E. L. Keyes, in a short interesting article on the "Fear of Death" (*Harper's Monthly Magazine*, July, 1909, p. 212), says that the following motto was chosen by John Fiske to adorn his library:—

"Disce ut semper victurus;
Vive ut cras moriturus."

Cf. Horace's well-known line—

"Omnem crede diem tibi diluxisse supremum."

Casca, in Shakespeare's *Julius Caesar*, says, "Why, he that cuts off twenty years of life, cuts off so many years of fearing death." In the case of some persons this would probably apply at the present day.

³ Even nowadays one may occasionally meet with a *memento mori* device or inscription scrawled up by a visitor or passer-by in some forum or public place, for instance, the saying, "Live as you would die."

effects on living beings, and with the attitudes of living beings towards death, the skeleton becomes clothed in flesh and blood, possesses heart and mind and passions, and above everything else, a little (though only a very little) of the priceless treasure of free will. In this paper I shall not, of course, attempt to discuss the aspects of death such as actually present themselves to dying persons. Fortunately, the near approach of natural death is generally by no means so terrible to the dying individual himself as it is popularly supposed to be.⁴

The main ideas underlying the *memento mori* principle are well expressed by ancient authors. Seneca, who tries to explain that death when it comes is not to be regarded as a calamity, though it may appear to be one ("Mors inter illa est, quae mala quidem non sunt, tamen habent mali speciem"), writes (*Epist. Mor.*, lib. xi. Ep. 3 (82), 16): "Itaque etiamsi indifferens mors est, non tamen ea est, quae facile neglegi possit: magna exercitatione durandus est animus, ut conspectum ejus accessumque patiatur." He thus counsels one to become familiar with thoughts of death, so that one may not be frightened by its aspect or approach; in fact, he tells one, as Horace (*Epist.*, lib. i. 4, line 13) puts it: "Omnem crede diem tibi diluxisse supremum."⁵ Any one following such advice literally might almost say: "Quocunque aspicio, nihil est nisi mortis imago" (Ovid,

⁴ In support of this statement I need only refer to Professor Hermann Nothnagel's *Das Sterben*, 2nd edit., Vienna, 1908.

⁵ Cf. William Congreve, in his Letter (1729) to Sir Richard Temple, Viscount Cobham:—

"Defer not till to-morrow to be wise;
To-morrow's sun to thee may never rise."

Serious and poetical advice of this kind has not escaped the attention of Roman satirists; the seriousness, indeed, of Horace's words is much modified by the lines which end his epistle in question.

Trist., i. 11, 23).⁶ Again he writes (*Epist. Mor.*, lib. viii. Ep. i. (70), 18): "On nothing is meditation so necessary (as on death)."⁷ According to Socrates, as quoted by Cicero (*Tusc. Disputat.*, i. 30, 74), the whole life of philosophers is a studying of death; and according to Plato (*Phædo*, 64, A), "They practise nothing else but to be ready to die." "Let all live as they would die" (George Herbert's *Outlandish Proverbs*, 1639). "Lebe, wie du, wenn du stirbst, Wünschen wirst gelebt zu haben" (Christian Fürchtegott Gellert, 1715-1769).⁸ The main idea in Ecclesiasticus (ch. xxviii. 6) is of course the same: "Remember thy end, and let enmity cease; remember corruption and death, and abide in the commandments." So also in the 90th Psalm (ver. 12, after Luther's translation): "Teach us to remember that we must die, so that we may become wise."

The ancient writers console one for the "Charybdis" which awaits all alike (Simonides) by a variety of arguments. They point out that death is a natural law, and

⁶ W. E. H. Lecky (*History of European Morals*, 1905 edition, vol. i. p. 202), in regard to the Stoic philosophers, wrote as follows: "But while it is certain that no philosophers expatiated upon death with a grander eloquence, or met it with a more placid courage, it can hardly be denied that their constant disquisitions forced it into an unhealthy prominence, and somewhat discoloured their whole view of life." He also quoted from Francis Bacon's *Essays*: "Of Death" (the second essay of the 1625 edition of the *Essays*): "The Stoics bestowed too much cost upon death, and by their great preparations made it appear more fearful."

⁷ A Danish memorial medal of George Hojer (1670) has the inscription "Mors omnibus æqua" on the obverse, and "Vita est meditatio" on the reverse.

⁸ Compare an inscription on a sixteenth-century sepulchral monument, attributed to the great French sculptor, Jean Goujon, in the Church of St. Gervais and St. Protais at Gisors:—

"Fay maintenant ce que voudras
Avoir fait quand tu te mourras."

as necessary as birth is, "Lex non poena mors;"⁹ "Nascentes morimur, finisque ab origine pendet;" "Principium moriendi natale est." Seneca, already quoted, offers numerous consolations.¹⁰ Epicurus, in a letter to Menaecus quoted by Diogenes Laertius, wrote: "Accustom yourself to the thought that death is indifferent; for all good and all evil consist in feeling, and what is death but the privation of feeling?" Similarly, Lucretius, who designated Epicurus (on account of the good which he thought his teaching had done) as a god, and who in the *De Rerum Naturâ* profoundly studied death from the point of view of natural philosophy, wrote—

"Scire licet nobis nil esse in morte timendum,
Nec miserum fieri qui non est posse, neque hilum
Differre anne ullo fuerit jam tempore natus,
Mortalem vitam mors cum immortalis ademit."¹¹

⁹ Lucan (*Pharsalia*, vii. 470), however, speaks of death (mors), "quæ cunctis poena paratur."

¹⁰ For much on the whole subject, see W. E. H. Lecky's *History of European Morals* (first edition, 1869; new edition, 1877).

¹¹ Muir's translation of this passage (Lucretius, *De Rerum Naturâ*, lib. iii. 866-869) is: "You may be sure that we have nothing to fear after death, and that he who exists not, cannot become miserable, and that it matters not a whit whether (a man) has been born into life at any time, when immortal death has taken away his mortal life." In this connexion I should like to quote the following three late Latin epitaphs, which seem to me to breathe the meaning of Lucretius:—

- (1) "Non nomen, non quo genitus, non unde, quid agi:
Mutus in æternum sum: cinis, ossa, nihil.
Nec sum nec fueram genitus, tamen e nihilo sum;
Mitte nec exprobes singula: talis eris."
- (2) "Olim non fuimus, nati sumus; unde quieti
Nunc sumus, ut fuimus: cura relicta: vale."
- (3) "D · I · M · NON · FVI · FVI · MEMINI · NON · SVM · NON · CVRO, &c.

All these three epitaphs are printed in *D. M. Ausonii Burdigalensis Opuscula*, the Teubner edition, Leipzig, 1836, p. 419. The first of the three is attributed to Ausonius. This style of epitaph has to some extent been imitated in modern times; for instance, the epitaph of a

John Addington Symonds, in his essay on Lucretius,¹² says that the *De Rerum Natura* has been called by a great critic the "Poem of Death," and that, as a motto on the title-page, there might be written: "And, Death once dead, there's no more dying then."¹³

In regard to the actual use of *memento mori* devices, we have the well-known passage in Herodotus (*Hist.*, lib. ii. 78), which informs us that at banquets given by wealthy persons in Egypt, it was the custom for some one to carry round the wooden image of a corpse, and tell each guest to drink and enjoy himself, since after death he would be like that image. A similar custom existed in Roman Imperial times, according to the account of the feast of Trimalchio (Petronius, *Satyr.*, c. 34), and certain miniature jointed skeletons made in bronze, preserved in various European museums (there is a specimen in the British Museum), are supposed to have been employed in this way at Roman banquets. The one introduced at Trimalchio's feast (at the end of the first course) was a jointed one of silver ("larva argentea").

What the original significance of such a custom may have been we need here scarcely pause to discuss. On the one hand, it may have been the so-called "Epicurean" ideal of life, namely, a life accompanied by beauty, wine,

gentleman named Micah Hall (Castleton, Derbyshire), who died in 1804, contains the following: "Quid eram, nescitis; quid sum, nescitis; Ubi abii, nescitis; Valete."

¹² J. A. Symonds, *Sketches and Studies in Italy and Greece*, Third Series (edition of 1898), p. 166.

¹³ Mr. W. Wroth has kindly ascertained for me that this quotation is from Shakespeare's *Sonnet*, No. 146, which begins—

"Poor soul, the centre of my sinful earth,"

and ends—

"So shalt thou feed on Death, that feeds on men,
And, Death once dead, there's no more dying then."

and garlands of roses (for those who can get them), till the gloomy unknown takes everything away. The ancient Egyptians seem, indeed, to have taken what one would term a rather "Epicurean" view of life.¹⁴

On the other hand, there are Plutarch (*Sept. Sap. Conviv.*¹⁵) and Sir J. G. Wilkinson (Rawlinson's *History of Herodotus*, third edition, London, 1875, vol. 2, p. 130), who suggest that the original purpose was to teach men "to love one another, and to avoid those evils which tend to make them consider life too long when in reality it is too short." Analogously, in the 90th Psalm (ver. 12) and in Ecclesiasticus (ch xxviii. 6) we have passages (already quoted) advising mindfulness of death, so that men shall be wise and cease from enmity.

That a degraded Epicureanism existed in Roman times is well shown by certain gems (to which I shall afterwards refer) engraved with "skeleton and wine-jar" devices, and likewise by the design on two magnificent Graeco-Roman silver wine-cups,¹⁶ forming part of the "Bosccoreale treasure" in the Louvre Museum at Paris, and supposed to date from the first century of the Christian era (see Fig. 1). These cups belong to a period when the philosophy of Epicurus was popularly supposed to advocate devotion to sensual pleasures.

¹⁴ Vide A. E. P. Weigall, "The Temperament of the Ancient Egyptians," *Blackwood's Magazine*, July, 1908, p. 58.

¹⁵ Plutarch, in his *Septem Sapientium Convivium* (c. 2), says that the Egyptian custom of introducing a skeleton at their banquets and reminding their guests that they also would soon die, tended to incite them, not to drunkenness and sensual pleasure, but to mutual friendship, deterring them from wasting their short span of life in wickedness. In *De Iside et Osiride* (c. 17), Plutarch again refers to the same Egyptian custom.

¹⁶ For beautiful illustrations of these cups, see A. Héron de Villefosse, "Le Trésor de Bosccoreale," *Monuments et Mémoires (Fondation Eugène Piot)*, Paris, vol. v., 1899, Pl. vii. and Pl. viii.

They are adorned with figures of skeletons ("shades"¹⁷) and garlands of roses, and bear various inscriptions, some of which urge the enjoyment of pleasure whilst yet life lasts, and whilst enjoyment of anything is possible: Eat,



FIG. 1.—Silver cup forming part of the so-called Boscoreale treasure in the Louvre Museum at Paris, supposed to date from the first century of the Christian era. Photograph from the facsimile in the Victoria and Albert Museum, showing the skeletons, or "shades," of the philosophers Epicurus and Zeno.

drink, and enjoy life whilst you can, for to-morrow you may die.

Some of the skeletons on these cups represent the shades of Greek poets and philosophers, whose names are

¹⁷ I suppose that the skeleton in this sense would have been termed a "larva," or εἰδωλον.

inscribed on the silver at their sides, and one of them, accompanied by a pig,¹⁸ is labelled as that of Epicurus himself. Epicurus (that is to say, his skeleton) has a philosopher's wallet ("scrip" of the New Testament) slung from the left shoulder, and holds a long philosopher's staff in the left hand, whilst he lays his right hand on what seems to be a large cake on a tripod table. The pig at his feet is likewise endeavouring to get at the cake. Above the cake is the inscription, ΗΔΟΝΗ ΤΟ ΤΕΛΟΣ ("Pleasure is the final object"). On the other side of the tripod stands the skeleton of Zeno (founder of the Stoic philosophy), with wallet and staff, in an attitude of disdain (see Fig. 1).

It seems, indeed, as if the devices on these two cups were intended to signify the temporary nature of all kinds of philosophic learning and sensual pleasure alike. The meaning would then be as follows: No matter whose philosophy you follow, you will have to die like the philosophers themselves, but whilst you live you can choose between seriousness and merely sensual pleasure. On the cup on which Epicurus is represented is an inscription confirming this interpretation. The inscription in question is [Ο]ΚΗΝΗ Ο ΒΙΟΣ ("Life is a stage"), probably a proverbial saying of the time, which likewise forms part of

¹⁸ What the popular conception of so-called followers of Epicurus was in Horace's time, and how in the mind of the people Epicurus came to be associated with a pig, is plain from the lines—

"Me pinguem et nitidum bene curata cute vides,
Cum ridere voles, Epicuri de grege porcum."

(Hor., *Epist.*, lib. i. 4, lines 15, 16.)

Lecky refers to the *Life of Epicurus*, by Diogenes Laërtius, in proof of his fine character and of the purity of the philosophy which he taught and of its misrepresentation by Roman so-called followers. Lecky admits, however, that Epicureanism, though logically compatible with a very high degree of virtue, tended practically towards vice.

the following (later) epigram (by Palladas) in the Greek Anthology: Σκηνὴ πᾶς ὁ βίος καὶ παίγνιον: ἢ μάθῃ παίζων τὴν σπουδὴν μεταθείς ἢ φέρῃ τὰς ὀδύνας ("All life is a stage¹⁹ and a game: either learn to play like a child, laying earnestness aside, or bear its griefs").

Many passages of the Greek Anthology²⁰ give advice of the *carpe diem* kind, and amongst Latin authors Horace may be especially quoted in this respect. See, for instance, his *Ode*, ii. 3, lines 13-16—

"Huc vina et unguenta et nimium brevis
Flores amoenae ferre jube rosae,
Dum res et aetas et sororum
Fila trium patiuntur atra."

The *Rubaiyat* of Omar Khayyam (c. 1060-1120) is full of "Epicurean" sentiments, showing also a tinge of "learned melancholy" and pessimism.²¹

The sentence in the Apocrypha, "Let us crown ourselves with rose-buds before they be withered" (Wisdom

¹⁹ Cf. the well-known passage in Shakespeare's *As You Like It*—

"All the world's a stage," &c.

²⁰ Compare J. W. Mackail's *Select Epigrams from the Greek Anthology*, London, 1906: Verses on the subject of life, pp. 295, 296. The epigram commencing Σκηνὴ πᾶς ὁ βίος is given on page 301, No. xliv.

²¹ Dr. Oliver Codrington kindly tells me that Fitzgerald's English translation imparts to the verses of the *Rubaiyat* a deeper "Epicurean" tinge than they in reality possess. Omar was certainly familiar with Greek literature. In a contribution to the *Royal Asiatic Society Journal* (London, 1898, p. 349), to which Dr. Codrington has referred me, Dr. E. D. Ross quotes (p. 354) the following passage from Ibn-al-Kifī, who wrote in the seventh century of the Hejira: Omar was "the most learned man of his day, was versed in the science of the Greeks. He encouraged the search after the One Judge by means of the purification of the inclinations of the flesh for the sake of the elevation of the human soul." It seems to me that a learned man with a Faust-like imagination is certain to have "Epicurean moods" at some period or other of his life, and such moods (frequently revealing a shade also of pessimism) may be the only ones well expressed by him in poetry.

of Solomon, ch. ii. 8), perhaps suggested the beautiful lines of R. Herrick (1591-1634)—

“Gather ye rose-buds while ye may,
Old time is still a-flying,
And this same flower that smiles to-day,
To-morrow will be dying.”

Very similar are the words of the popular German students' song (Johann Martin Usteri, 1793)—

“Freut euch des Lebens,
Weil noch das Lämpchen glüht;
Pflücket die Rose,
Eh sie verblüht.”

Some of the so-called “*Moralische Pfenninge*” of the town of Basel, which I shall afterwards describe, represent roses and Death's heads, with the inscription, “*Heut rodt, Morgen tod*” (“To-day red, to-morrow dead”), or “*Heut send (sind) wier rot und Morgen tod*” (“To-day we are red and to-morrow dead”).

It was in Mediaeval Europe, under the auspices of the Catholic Church, that descriptions and representations of the terrors of death and hell began to take on their most horrible aspects.²² Thoughtful artists of late Mediaeval and later periods have delighted in contrasting

²² In this connexion it may be remarked that whilst some of the so-called “parting scenes” on Greek sepulchral marble reliefs are sorrowful in a simple and beautiful way of their own, the mural paintings in Etruscan tombs invest the idea of death (and the parting scenes represented) with horrors equal to those conjured up by mediaeval superstition and mediaeval art. The brutal-looking Etruscan “Charon” with his hammer, and occasionally other malignant-looking demons, like Gorgons or Furies (though usually represented as males), sometimes holding snakes in their hands, play an important part in Etruscan death scenes.

death and the emblems of death with the strenuous ambitions, careless indulgences, vices and follies of everyday life. They have delighted in representing the universal power of death, how it carries off rich and poor alike, kings and peasants, wise men and fools, good and bad, old and young, beautiful and ugly. As examples we may refer to the various series of the "Dance of Death" ("Danse Macabre") made by various artists during the fifteenth and sixteenth centuries.²³ The best-known series, that attributed to Holbein, ends with the "arms of Death" ("Wappen des Todes"), a design representing a man and woman supporting a shield with a Death's head as armorial bearing. Albrecht Dürer's well-known engraving (1513), representing a knight on horseback with Death (likewise on horseback) by his side and the devil behind him, is typical of this great artist's work. By Dürer also are the following: A woodcut (1510) of Death and a soldier; a rough drawing (in the British Museum) of Death holding a scythe and riding on a horse (perhaps emblematic of a spreading pestilence), with the inscription ME(M)ENTO MEI, and the date 1505; an early drawing of Death swooping down upon a rider, who is being thrown from his horse (emblematic of sudden and unexpected death). In regard to Dürer's

²³ Many illustrations from various series are given in E. Holländer's *Karikatur und Satire in der Medicin*, Stuttgart, 1905; but on the whole subject, see especially the elaborate work by E. H. Langlois, entitled, *Essai historique, philosophique, et pittoresque sur les Danses des Morts*, Rouen, 1851; also F. Douce's work on *Holbein's Dance of Death, &c.*, London (Bohn's Illustrated Library), 1858. In spite, however, of the work of Langlois and others, there is still room for a book on what might be termed the "artistic philosophy of death," that is to say, on philosophic thoughts and opinions regarding death, as illustrated by works of art (both great and small) of various ages and of various countries.

"Wappen des Todes" (Fig. 2), it seems to me that the engraving in question (1503) has a different meaning²⁴



FIG. 2.—Dürer's so-called "Wappen des Todes" (engraving in the British Museum).

²⁴ Dürer, in his engraving termed "Wappen des Todes" (dated 1503), seems to me to have used the Death's head rather as an emblem of ruin and destruction than as a *memento mori* in the ordinary sense of the term. The hairy satyr-like man (like a "savage man" in heraldry)

to that of Holbein's "Wappen des Todes," and that it is not merely a *memento mori* device like the latter.

An engraving by the "Meister des Amsterdamer Kabinets" ("Meister von 1840") represents Death (with toad and snake) warning a fashionably dressed youth. The subject of another engraving by the same master is the story of the three living kings coming upon three dead ones. This thirteenth-century tale or legend ("morality" story) of three living men meeting three dead men ("les trois morts et les trois vifs"), of which various versions exist,²⁵ formed a favourite subject for artists, and possibly inspired the preliminary versions of

who supports the shield of arms seems to be endeavouring to seduce a woman. Look first at the woman. She is the traditional lady of Mediæval times, who is dreaming of a lover,—a gallant knight he must be, and one whose arms can rival others in antiquity and fame. Then look at the man, who approaches gently from behind, whispering into the lady's ear. The lady listens to his suggestions, but she has not yet turned her head to see his hideousness of person, and as yet she can only see his shield with the helmet and wings above it, which might find favour in any lady's imagination. Perhaps Death himself, whose device the man bears, would be preferable to such a lover, for Death is at least a *chevalier sans peur et sans reproche* in so far as his armorial device, here pictured, is as ancient as the human race, and he himself has never yet been sullied by real defeat at human hands. One cannot help thinking that Dürer, in this engraving, has employed a "savage man," not only as an ordinary heraldic "supporter," but likewise to convey a hidden satire on the pursuits of some of the nobles of his time. Perhaps, however, the "savage man" and the "gentle lady" were intended merely to represent Life, supporting the emblem of Death; life does in truth support death, for without life there could be no death.

"Le dit des trois morts et des trois vifs," and the doleful talk of the dead to the living, may well be contrasted with a story of the Chinese mystic, Chuang Tzu (*Musings of a Chinese Mystic*, London, 1906, p. 84), to which my attention was kindly drawn by Mr. John Allan: One day the Chinese philosopher came upon a bleached human skull and (Hamlet-wise) mused as to what kind of a man it had once formed part of. In the night he dreamt that the skull appeared to him and told him that after death there were no troubles, that existence was bounded only by eternity, and that the happiness of a king among men did not exceed that enjoyed by the dead.

the "Dance of Death" ("Danse Macabre"), a subject which became so popular in the fifteenth and sixteenth centuries. Three men (rarely women), generally wearing crowns, generally on horseback, and generally engaged in the pastime of hunting, are represented as being suddenly reminded of death by coming upon three decaying corpses (being "eaten by worms"³⁶) or skeletons. An early fourteenth-century manuscript of the Arundel Collection in the British Museum (No. 83, fol. 128) has

³⁶ The idea of representing the decaying body as being occupied by long worms, snakes, toads, &c. (i.e. as being "eaten by worms," according to a phrase still in use in some countries), was doubtless chiefly derived from Ecclesiasticus (ch. x. 11), "For when a man is dead, he shall inherit creeping things, beasts, and worms." An engraving of about 1480, by the "Meister I. A. M. von Zwolle" (the "Meister mit der Weberschütze"), represents Moses with the tables of the ten commandments in an upper compartment, and a decaying corpse, being "eaten by worms," in a lower compartment. This design is evidently meant to illustrate another particular passage in Ecclesiasticus (ch. xxviii. 6): "Remember corruption and death, and abide in the commandments." Even when Death was represented by a skeleton or shriveled body in life-like attitude, the snakes and toads were sometimes not omitted. Thus, in a German fifteenth century woodcut (by an unknown artist) of "Death in the Jaws of Hell" (reproduced in the *Catalogue of Early German and Flemish Woodcuts in the British Museum*, by Campbell Dodgson, 1903, vol. I. Pl. 2), Death, who is represented by a shriveled figure of skin and bones (in the mouth of a monster who is vomiting up flames), is accompanied by a snake, and has a toad in place of the conventional fig-leaf. So also, in the fifteenth-century engraving of "Death warning a Youth," by the "Meister des Amsterdamer Kabinetts" (already referred to), the life-like shriveled figure representing Death is accompanied by a toad and snake. In this connexion one may well remember the lines of Edward Young (*The Complaint*, 1742)—

"The knell, the shroud, the mattock, and the grave;
The deep damp vault, the darkness, and the worm;
These are the bugbears of a winter's eve,
The terrors of the living, not the dead."

The attributes and pomp of death may frighten more than death itself. Cf. Bacon's *Essays*: "Of Death," and his reference to a supposed passage on the terror of the pomp of death in Seneca's writings.

a representation of three kings, one of whom carries a falcon, and three skeleton-like corpses. Over the kings are the following inscriptions: "Ich am afert;" "Lo whet ich se;" "Me thinketh hit beth develes thre." Over the three corpses are: "Ich wes wel fair;" "Such scheltou be;" "For Godes love, be wer by me." The same story evidently suggested an early fourteenth-century mural painting (with the inscription, "Mors sceptris ligonibus aequat") which formerly existed at Battle Church, in Sussex,²⁷ and also a mural painting in the church of Ditchingham, Norfolk.²⁸ The same story forms part of the well-known "Triumph of Death," a fresco attributed to Orcagna or Lorenzetti (fourteenth century), in the Campo Santo of Pisa; it is the subject of a sketch by Benozzo Gozzoli (1420-1497), preserved in the Louvre at Paris; and occurs in A. Vérard's "Dance of Death" series published in 1492.²⁹ In the Pisan fresco, a party of men engaged in hunting, three of whom wear crowns, are represented as coming suddenly upon three open coffins, in each of which is a decaying corpse, one with a crown on its head. "Les trois morts" are again met with in an anti-Papal drawing of the school of Augsburg (early sixteenth century), which pictures the Pope and a group of ecclesiastical dignitaries being interrupted in some procession or ceremony by three skeletons, one of whom wears a crown. It should be observed that in the representations of "Les trois morts et les trois vifs" both the live men and the dead men generally bear the attributes of worldly power and wealth; the moral which it was

²⁷ See *Journ. Archaeol. Assoc.*, London, 1847, vol. 2, p. 151.

²⁸ See *Archaeological Journal*, London, 1848, vol. 5, p. 69.

²⁹ See Paul Richer's *L'Art et la Médecine*, Paris, 1903, pp. 525-531.

intended to point out may be summed up in the following mediaeval Latin doggerel :—

“O dominus dives,
Non omni tempore vives;
Fac bona dum vivis,
Post mortem vivere si vis.”

Hans Burgkmair (about 1510) pictures Death strangling (or rather, in a peculiar kind of way, suffocating) a lover, whose lady flees in terror. Hans Sebald Beham (1522) shows Death approaching a woman on a couch, whose husband or lover lies dead on the floor of the room. By the same artist is the engraving (1541) of Death accosting a lady with an hour-glass in her hands, who is walking in a garden, with the inscription, “Omnem in homine venustatem mors abolet.” His brother, Barthel Beham (1502-1540), engraved a *memento mori* design of a baby, hour-glass, and human skulls; there are two varieties (with three and four skulls respectively), one (that with four skulls) bearing the inscription, “Mors omnia aequat”²⁰ (*vide* Fig. 3). Another engraving (Fig. 4) by the same master represents a mother giving her baby the breast (perhaps the Madonna and Infant Christ); on the table and window-sill are a Death's head and an hour-glass.

Death is pictured on an engraving by Marcantonio Raimondi (early sixteenth century) as a skeleton with wings and a scythe. On an engraving representing the “Hour of Death,” by Raimondi's pupil, Agostino Veneziano, an aged woman with bent back, leaning on a staff

²⁰ The design better illustrates the oft-quoted line of Manilius: “Nascentes morimur, finisque ab origine pendet;” or, as a physiologist has expressed the same idea, “the first cry of the newly born child is the first step towards the grave.”

and carrying a basket of sticks, approaches an open grave, from which the hand of a skeleton holds out a winged



FIG. 3.—Baby with the four skulls. Engraving by Barthel Beham, in the British Museum.

hour-glass.³¹ In an anonymous Dutch engraving of the



FIG. 4.—Mother and child, with skull and hour-glass. Engraving by Barthel Beham, in the British Museum.

³¹ There are other German, Flemish, or Italian engravings and paintings of the fifteenth and sixteenth centuries, representing fairly simple *memento mori* devices (such as a Death's head in an architectural setting

seventeenth century, Death is seen conducting a sick man to have his urine examined by a doctor, as in one of Holbein's "Dance of Death" series, but Death has probably also come for the doctor himself. In a "Dance of Death" engraved by Zimmermann in a Swiss almanac, Death brings his urine to the doctor for inspection. In an engraving of the Anatomical Theatre of Leiden in 1610, skeletons are represented holding up *memento mori* and kindred quotations, such as "Mors ultima linea rerum" (Horace); "Nascentes morimur" (Manilius); "Principium moriendi natale est;" "Mors sceptrum lignibus aequat;" "Nosce te ipsum;" "Pulvis et umbra sumus" (Horace). These sayings were introduced less probably for the benefit and instruction of the medical students than for the edification of the learned men, lawyers, travelling noblemen, fashionable ladies and sight-seers, who in former times used to visit the anatomical theatres out of curiosity or in search of emotional distractions. Philosophical considerations on life and death were likewise introduced into anatomical lectures and demonstrations.

What may be termed "the *memento mori* age" included the fifteenth, sixteenth, and seventeenth centuries, and the popularity of *memento mori* devices certainly culminated in the "Dance of Death" designs of the sixteenth century. One must not forget that, owing to the prevalence of, and greater mortality from, epidemic diseases, the saying, "To-day red, to-morrow dead," was still more applicable to human life then than it is in quite modern times. *Memento mori* devices

with inscriptions, or a skeleton in various attitudes) to which I cannot allude in this place.

occurred everywhere, on paintings and prints, on sepulchral monuments, as architectural ornaments, in books of emblems, on all kinds of jewellery (especially on memorial finger-rings), on devotional objects (such as rosary beads in the form of Death's heads), and on medals. A monkish life of contemplation with "*Innocentia et memoria mortis*," or "*Mors omnibus communis*," or "*Vita est meditatio*," as a motto, was regarded by many as the ideal life to lead, even by those who themselves took a large and active share in the practical work of the world. To illustrate this feeling we need only quote Sir Thomas More, the patron of Holbein who was very familiar with the use of *memento mori* devices, and the friend of Erasmus the great scholar, whose own *mememto mori* device, as represented on his medals and favourite seal, we shall have later on to refer to. When imprisoned in the Tower of London, seeing from the window some monks going to execution, Sir Thomas More said to his daughter, Margaret Roper, who was there beside him: "Dost thou not see, Meg, that these blessed fathers be now as cheerfully going to their deaths as bridegrooms to their marriages? Wherefore, thereby mayst thou see, mine own dear daughter, what a great difference there is between such as have in effect spent all their days in a straight and penitential and painful life, religiously, and such as have in the world like worldly wretches (as thy poor father hath done) consumed all their time in pleasure and ease licentiously." ³²

³² W. Roper's *Life of Sir Thomas More*. This contrast between the life of the religious recluse and an ordinary life of worldly pursuits is exactly the same as that pictorially expressed in the famous "Triumph of Death," a fresco (already referred to) attributed to Orcagna or Lorenzetti (fourteenth century) in the Campo Santo of Pisa.

A similar train of thought is suggested by Holbein's portrait (in the Munich Pinakothek) of Sir Brian Tuke,



FIG. 5.—Holbein's painting of Sir Brian Tuke, in the Munich Pinakothek.

with a figure of Death, holding a scythe, behind him, waiting for the hour-glass to run out. Sir Brian Tuke,

a contemporary of Sir Thomas More, was Secretary to Cardinal Wolsey, and afterwards Treasurer of the Household to King Henry VIII. He was a patron of learning, and was celebrated by John Leland, the "father" of English antiquaries. On the picture in question he is pointing to a passage from the Vulgate version of the Bible, signifying, "Will not the small number of my days be soon ended?" (Job x. 20). (See Fig. 5.)

There are numerous references to *memento mori* objects (finger-rings, etc.) in old English literature. One of the commonest *memento mori* devices was a skull and crossed bones, generally with the inscription, "Respice finem" or "Memento mori." Shakespeare alludes several times to such devices. In the *Merchant of Venice* (act i. scene 2), Portia says: "I had rather be married to a Death's head with a bone in his mouth than to either of these." In the First Part of *Henry IV* (act iii. scene 3), Falstaff says to Bardolph: "I make as good use of it (Bardolph's face) as many a man doth of a death's head or a *memento mori*." In the Second Part of *Henry IV* (act ii. scene 4), Falstaff says to Doll Tearsheet: "Peace, good Doll! do not speak like a death's head; do not bid me remember mine end." In *Love's Labour's Lost* (act v. scene 2), Biron compares the countenance of Holofernes to "a death's face in a ring;" and in one of Beaumont and Fletcher's plays (see later on) the following passage occurs: "I'll keep it as they keep death's heads in rings, to cry *Memento* to me."

Amongst many modern pictures bearing on the subject we may recall the "Pursuit of Fortune," by R. Henneberg (1826-1876), in which a knight riding his fatal race after Fortune is attended by Death in the guise of his squire. This picture has some of the weird and ghastly fancy

of G. A. Bürger's ballad *Leonore* (1774).³³ Arnold Boechlin (1827-1901), in a portrait (now in the National Gallery of Berlin) of himself in 1872, has represented Death as a fiddler behind him, much in the same way as in the sixteenth century Sir Brian Tuke (as already stated) had himself painted by Holbein, with Death holding a scythe behind him waiting for the hour-glass to run out. Several designs by William Blake (1757-1827) may be regarded as having a *memento mori* character, especially his illustrations to Robert Blair's "The Grave," a poem first published in 1743, before Blake was born. But amongst modern artists Alfred Rethel is quite unsurpassed in his weird and powerful representations of Death, in respect of which he may be ranked with Dürer and Holbein. His "Dance of Death in 1848," showing how Death was the only real gainer from the civil war and barricade-fighting of that unsettled year, is perhaps his masterpiece. The richness of his wonderful imagination is also well shown by his Death coming as a friend (at the peaceful end of an old man's life), and by his representation of Death breaking up a masked ball (the idea being derived from a story of the outbreak of cholera at Paris in 1832). Another "contemporary" "Dance of Death" series, produced in the nineteenth century, is the interesting "English Dance of Death," by Thomas Rowlandson, the famous caricaturist, with letterpress (1815-1816) by William Combe, the author of the *Tours of Dr. Syntax*.

To the dreadful realism with which death and decay

³³ This poem is true enough to nature, if *Leonore's* ghastly ride be regarded as a nightmare dream or as a delusion during the delirium period of fever in the case of a person familiar with legends of vampires and such like.

have sometimes been represented, as for instance by the Spanish artist, Juan de Valdes Leal (1630-1691), in his "Finis Gloriarum Mundi" picture⁵¹ at the Caridad Hospital at Seville, we may contrast the hidden allusion to Death (a distorted skull) in Holbein's picture (painted in 1533), known as "The Ambassadors," in the London National Gallery. In the latter picture the presence (on the floor in the foreground) of a curious *memento mori*, namely, a human skull elongated almost beyond recognition, as it would appear if reflected from a cylindrical concave mirror, is accounted for by what is known about Jean de Dinteville, Lord of Polisy, one of the two men represented. He wears in his black bonnet a jewel formed of a silver skull set in gold, and there are reasons for supposing that at that time of his life (he was twenty-nine years of age when the picture was painted) he thought much of death, and he had doubtless seen the so-called Holbein's "Dance of Death" designs, or similar designs in other series.⁵² This picture by Holbein, and Holbein's portrait of Sir Brian Tuke, to which I have already alluded, throw much light on the use of *memento mori* devices in the sixteenth century. I shall later on refer to the favourite device of Erasmus, a terminal head with the legend "Cedo nulli," or "Concedo nulli," a device chosen for his medals and for the seal with which, in the house of Jerome Frobenius at Basel, he signed his last will, dated 12th February, 1536.

⁵¹ Murillo is said to have remarked of this picture that it was so forcibly painted that it was necessary to hold one's nose when looking at it. See Sir W. Stirling-Maxwell's *Annals of the Artists of Spain*, new edition, 1891, vol. 4, p. 1291.

⁵² See *Holbein's Ambassadors, the Picture and the Men*, by Mary S. Hervey, London, 1900.

It is almost needless to point out that the aspect of, or mental attitude towards, death must vary much with the age, sex, temporary or permanent occupation (or want of occupation), past experiences, future prospects, education, moral and religious surroundings, personal principles and religious beliefs, aspirations, ambition, personal, hereditary or racial temperament, and the temporary state of health and enjoyment in life. It must, to some extent, vary from time to time according to the condition of the mind and body and the changing moods of the individual. Moreover, supposed proximity is likely often to modify as well as to intensify the aspect in which the idea of death presents itself.

My own interest in *memento mori* medals dates from about 1892, when I contributed a short note to the *Numismatic Chronicle* (Third Series, Vol. XII. p. 253) on a curious seventeenth-century medalet in my collection, bearing the inscription, "As soone as wee to bee begunne, We did beginne to be undone," an old English version of Manilius' line, "Nascentes morimur, finisque ab origine pendet." About that time I likewise acquired fine specimens of an Italian *memento mori* medal by Giovanni Boldu, dated 1466, and of the large medal of Erasmus of Rotterdam (1519), with his favourite "terminus" design on the reverse.

PART II.

ARRANGEMENT.

IN order to avoid repetition, I shall first attempt to arrange the various possible aspects of death and mental attitudes towards the idea of death into groups numbered by Roman numerals, and then, when describing the medals, &c., in Part III., I shall refer, by Roman numerals in brackets, to the group or groups which I think each one illustrates. In regard to the engraved gems, finger-rings, jewellery, &c., considered in Part IV., I have not thought it necessary to give a reference to one of these groups with each article described.

I. THE SIMPLE *MEMENTO MORI* IDEA.

In this group death is viewed merely as the necessary end of life, the final goal (*ultima linea* ³⁶): "*Mors ultima linea rerum est*" (Horace, *Epist.*, i. 16, line 79).³⁷ Slightly

³⁶ In the common *memento mori* inscription, "*Respice finem*," the Latin word "*finis*," like the Greek *τέλος* and the English "*end*," may perhaps be taken to mean the final object as well as the final event of life. If this were so, "*Respice finem*" would be almost equivalent to "*Live to die*." So also when death is described as the "*ultima linea rerum*," the word "*linea*" (doubtless used by Horace as the goal-line in a race) may signify either the limit (end) or the object (goal).

³⁷ Cf. "*Mors omnia aequat*." For the idea of death as the end of all "*things*," compare also—

"*Data sunt ipsis quoque fata sepulchris*,"

more complicated expressions of the same simple idea are: "Principium moriendi natale est;" "Lex non poena mors;" "Nascentes morimur, finisque ab origine pendet" (on a medal of Galeotto Marzi, &c.); "Mediâ morte in vitâ sumus," &c. The simple *memento mori* devices corresponding to these simple *memento mori* legends include such common emblems as the following: a human skull; a human skull and crossed bones; a human skull and hour-glass; a human skeleton holding an hour-glass; a winged boy holding an inverted torch;⁸⁸ a tomb or sepulchral urn; a baby or child resting on a human skull. The last device specially illustrates the line of Manilius: "Nascentes morimur, finisque ab origine pendet;" that is to say, as a physiologist has expressed the same idea, "the first cry of the newly born child is the first step towards the grave."

Sudden death from injury (especially accidental injury) or disease is expressed by such devices as a rose-bush and death's head, or a dead stag transfixed with an arrow,

and the English equivalent—

"So far is ought from lasting aye
That tombes shal have ther dying day."

Both of these, together with several other *memento mori* sayings, are inscribed on a painted wooden memorial tablet of the year 1586 in Adderbury Church, Oxfordshire. *Vide Proceedings of the Society of Antiquaries*, London, 1905, 2nd Series, vol. 20, p. 221. The line—

"Quandoquidem data sunt ipsis quoque fata sepulchris"

is from Juvenal (*Satire*, x. 146), and has been rendered by C. Badham, in his translation of Juvenal (1831)—

"For fate hath fore-ordained its day of doom
Not to the tenant only, but the tomb."

Cf. "Mors etiam saxis nominibusque venit" (Ausonius). Compare also Propertius, *Opera Omnia*, lib. iii. 2, lines 19 *et seq.*

⁸⁸ A "genius of death" like this occurs as a device on Roman sarcophagi.

and by such words as "Hent rodt, Morn todt" (To day red, to-morrow dead"), as on certain so-called "Moralische Pfenninge" struck at Basel in the seventeenth century. One must not forget that the terrible and devastating pestilences of former times increased the significance of such *memento mori* tokens, recalling the liability to sudden death.

According to individual temperaments and circumstances, as already stated, such simple aspects of death may give rise to various mental attitudes, and may exert very different effects. They may favour vital depression or excitation. They may, for instance, modify ambition, induce remorse, diminish future effort or stimulate to make the best use of life while life lasts. According also to individual temperaments and circumstances, the simple aspect of death may be as the "king of terrors" or as the "prince of peace." Some of the expressions above referred to (e.g. "Lex non poena mors;" "Principium moriendi natale est") may be regarded as carrying a certain amount of consolation (cf. under Heading VIII.) with them.

II. DEATH AS THE THRESHOLD OF A FUTURE EXISTENCE. DEATH FROM THE STANDPOINT OF RELIGIOUS FAITH. METEMPSYCHOSIS.

"Mors janua vitae." "A deathlike sleep, a gentle wafting to immortal life" (Milton, *Paradise Lost*, book xii. line 434). Death may be regarded as the entrance into a higher state of existence by all those who believe in personal immortality, including those who incline to the doctrine of a gradual evolution of souls (by metempsychosis) through the ages, analogous to Darwinian evolution

in the form and functions of the body.³⁹ A medal of Galeotto Marzi (fifteenth century) is inscribed with the well-known line of Manilius: "*Nascentes morimur, finisque ab origine pendet;*" followed by the words, "*Superata tellus sidera donat.*" A memorial medal on the death of Sir John Hotham (1645) bears the inscription, "*Mors mihi vita;*" and the same inscription occurs on a memorial medal of the famous natural philosopher, Aloisio Galvani. Quite similar is the inscription, "*Moriar ut vivam*" (with the device of a phoenix rising from flames, as an emblem of the resurrection, or of the survival of the soul after the death of the body) on one of the so-called "*Moralische Pfenninge*" (seventeenth century) of the town of Basel. A phoenix, likewise as an emblem of the resurrection and of the immortality of the soul, occurs on some fifteenth and sixteenth century Italian medals (Domenico Riccio, Tommaso Moro, and Cardinal Christofero Madruzzo), accompanied by inscriptions such as, "*Moriens revivisco*" ("Dying, I come to life again"). A memorial medal of Adolph Oeco III (1524-1606), a physician of Augsburg, is inscribed, "*Vita mihi Christus, mors erit ipsa luerum*" ("To me to live is Christ, and to die is gain," St. Paul's Epist. to the Philippians, ch. i. 21); and on another memorial medal of the same physician we read, "*Absorpta est mors in victoriam*" ("Death is swallowed up in victory," St. Paul's First Epist. to the Corinthians, ch. xv. 54). Luther is said to have worn a gold Death's head ring (see later) on which was the inscription, "*O mors, ero mors tua*" ("O death, I will be thy death").⁴⁰

³⁹ The idea of a "diffused immortality" of souls is not altogether opposed to the same aspect of death.

⁴⁰ This inscription, apart from the religious interpretation (cf. "Death

The memorial medal of Nicholas and Dorothy Wadham (1618), the founders of Wadham College, Oxford, bears the inscription, "When Christ who is our life shal appeare, we shal appeare with him in glory." All memorial medals with legends of the usual epitaph kind, relating to existence after death, may be regarded as illustrating the same aspect of death.

A memorial mourning ring is inscribed, "Heaven is my happyness;" and W. Lenthall (1591-1662), Speaker in the House of Commons, directed by will that the rings given away at his funeral should be inscribed, "Oritur non moritur." A sixteenth-century memorial ring in the Victoria and Albert Museum has the inscription, "Dye to lyve." A somewhat later memorial locket bears a representation of the resurrection; whilst an eighteenth-century mourning brooch has a picture of relatives mourning at a tomb, and comforts them with the inscription, "Heaven has in store what thou hast lost." Lady Evans possesses a small engraved metal plate of the seventeenth century in memory of a boy who, before he died, dreamt "that he had wings and flew to heaven."

A medal on the death of Marshal Schomberg at the Battle of the Boyne (1690) bears on its edge the inscription, "Pro religione et libertate mori, vivere est." Some memorial medals and memorial finger-rings (which will

is swallowed up in victory"), may be compared to Shakespeare's line (already quoted)—

"And, Death once dead, there's no more dying then."

Compare also the sixteenth-century epitaph (said to be on Joan Brodnax, 1592)—

"Lyve well and Dye never,
Dye well and Live ever."

be described afterwards), on the death of King Charles I of England, allude to a celestial crown as a reward for a martyr's death. But such inscriptions and devices bring us to the subject of medals, &c., commemorating death or martyrdom for religious, patriotic, political, or social opinions, and such medals (and other memorials) are best classed under Heading XI.

I shall subsequently allude to the supposed gem-portraits of Plato with butterfly wings attached to his temple (on the side seen in the profile portraits), in allusion to his argument for the immortality of the soul. These are all bearded heads on quadrangular bases after the manner of a so-called "Hermes" or (in Rome) "Terminus." Furtwängler regards them as representing, not Plato, but Hypnos. However, the gem-type of a philosopher, seated, reading from a scroll, with a human skull and a butterfly before him, evidently refers to thoughts on death and the soul, *i.e.* on the mortality of the body (the skull) and the immortality of the soul (the butterfly). In regard to the subject of existence after death one may further mention certain Roman Imperial coins and "medallions" with a representation of "Aeternitas" on the reverse; engraved gems and Roman Imperial coins with peacocks or other symbols of immortality; certain antique coins (Eleusis in Attica) and engraved gems, with devices relating to the Eleusinian Mysteries; the scarabs and other amulets placed by the ancient Egyptians (down to Ptolemaic times) with mummies to be of service to the deceased in his future life; antique engraved gems representing (or with types referring to) Hermes in his character of *ψυχοπομπός*, the conductor of the souls or shades of deceased persons to the nether world; certain antique engraved gems with devices

possibly referring to the Pythagorean and Orphic doctrines, supposed originally to have been derived from India,⁴¹ of a transmigration of souls (metempsychosis); the coins ("Charon's obolus" or "danacé") placed in the mouth of deceased persons in ancient Greece, and the little circular embossed thin plates of gold ("gold bracteates" of modern numismatists) which probably served a similar purpose. In spite of Lucian's ridicule, the custom of placing coins in the mouth of corpses survived from ancient Greece, through Roman and Byzantine ages, to modern times in Roumelia and Anatolia.

Under the present heading one might mention certain superstitions and customs connected with the belief in an existence after death, namely, the weird superstitions connected with the primitive "vampire" tales of Eastern Europe; the Oriental and ancient customs of the sacrificial death or suicide of wives to accompany their husbands (the "Sutteeism" of widows in Hindustan), or of slaves to accompany their masters, into the future life; the idea of the restless wandering spirits or ghosts of murdered persons and suicides, who are able to haunt and worry the living, especially those who injured them during life; and (intimately allied to the last idea) the old Chinese idea of the possibility of obtaining revenge by means of suicide, *i.e.* the idea that the spirit of the dead man may haunt and punish those whose cruelty and malevolence drove him to commit suicide.⁴² But I have

⁴¹ There are, of course, many Buddhist works of art representing scenes from the "Jatakas," that is to say, incidents from supposed earlier existences of Buddha. Amongst such works of art is the series of sculptures in the British Museum from the Buddhist Tope at Amaravati in Southern India.

⁴² In the British Museum there are some fine coloured Japanese

found nothing in the way of medals, &c., relating to such peculiar aspects of, and mental attitudes towards, death and the supposed life beyond it.

Medals commemorating executions come under Heading V., and those commemorating martyrdom for religious opinions come under Heading XI., but both these classes are likewise connected with the present heading, since the cruel executions for heresy depended to a certain extent on the belief in a future existence. The Christian inquisitors or other judges often really believed that they were benefiting their victims by mercilessly torturing and killing them,—that, in fact, they diminished punishment in the life to come by present punishment inflicted in the name of religion. Here we may likewise mention that the types of certain antique engraved gems possibly refer to human sacrifices.⁴³ The horrors of human sacrifices and the cruel rites (including "Sutteeism") connected with barbarous religious superstitions, were forcibly depicted and denounced by the Roman poet, Lucretius, to part of whose *De Rerum Naturâ* might be prefixed the words: "O Religion! what crimes have been committed in thy name!" (altered from the words on Liberty ascribed to Madame Roland at the guillotine, 1793).

prints or drawings representing the malevolent apparition of ghosts or skeletons. Another class of suicide for revenge has been reported from certain parts of Africa. There a person whose acts have driven another to commit suicide has himself to undergo a like fate. *Vide* E. Westermarck, *Origin and Development of Moral Ideas*, 1906, vol. ii. p. 233.

⁴³ Of course some gem-types of the kind may merely depict mythological incidents. On this question see A. Furtwängler, *Die antiken Gemmen*, Leipzig, 1900, vol. iii. pp. 229, 260.

III. SURVIVAL AFTER DEATH IN THE MINDS OF OTHERS. POSTHUMOUS FAME.

There are, of course, many medals bearing on the subject of fame of various kinds. Horace thought "Non omnis moriar" (*Od.*, iii. 30, 6), when he had finished his third book of *Odes*, and many men are said to have "immortalized" themselves by their writings or their deeds. An Italian medal of doubtful authenticity, described by Luckius,⁴¹ represents Fame, with two trumpets, flying to left, and bears the inscription, "Mortalium immortalitas."

Lecky, in his *History of European Morals*, writes: "The desire for reputation, and especially for posthumous reputation—that last infirmity of noble mind"⁴²—assumed an extraordinary prominence among the springs of Roman heroism. . . . Marcus Aurelius, following an example that is ascribed to Pythagoras, made it a special object of mental discipline, by continually meditating on death and evoking, by an effort of the imagination, whole societies that had passed away, to acquire a realized sense of the vanity of posthumous fame." We shall see later on that the vanity of posthumous fame is well expressed on some engraved gems of Roman times.

⁴¹ Armand, *Les Médailleurs Italiens*, 2nd edit., Paris, 1889, vol. ii. p. 119, No. 60.

⁴² Milton, *Lycidas*, line 71. Lecky compares this with the remark of Tacitus (*Hist.*, iv. 6): "Etiam sapientibus cupido gloriæ novissima exuitur" ("The desire for fame is the last desire that is laid aside even by the wise"). Cf. St. Augustine, *De Civit. Dei*, 5. 14.

IV. DEATH AS THE END OF PAIN AND MISERY.

"O death, acceptable is thy sentence unto the needy, and unto him whose strength faileth, that is now in the last age, and is vexed with all things, and to him that despaireth and hath lost patience" (Ecclesiasticus, ch. xli. 2); "It is better to die once for all (ἀπαξ) than to suffer all our days" (Aeschylus, *Prom. Vinc.*, lines 769, 770). In connexion with this aspect of, or attitude towards, death as giving freedom from pain, the comparison of death to a peaceful sleep⁴⁰ after the fatigue and turmoil of the day follows naturally. Compare A. Rethel's beautiful design (1851) of "Death as a Friend," tolling the bell of the tower at the peaceful termination of the aged bell-ringer's life.

"Be the day weary, or be the day long,
At length it ringeth to Evensong."

"Death is rest from labour and misery" (after Cicero); "Were death denied, to live would not be life" (E. Young). Of course, to believers in a future existence, death may appear not only as the end of pain, but also as the "crown of life," the recompense for pain and trouble bravely borne (compare Heading XV.).

"Death gives us more than was in Eden lost,
This king of terrors is the prince of peace."

(Edward Young, *The Complaint*, 1742.)

⁴⁰ Yet, as Sir Lyon Playfair (afterwards Lord Playfair) pointed out, it is merely poetry to call sleep the "twin-brother of death;" scientifically, sleep is rather the preserver of life and a sign of life than in any way analogous to death. Vide Sir A. Mitchell, *Dreaming, Laughing, and Blushing*, 1906, p. 10.

V. DEATH AS A MEANS OF PUNISHMENT, VENGEANCE,
OR ATONEMENT. THE THREAT OF DEATH AS A
MEANS OF EXCITING TERROR. POLITICAL MURDERS
AND POLITICAL EXECUTIONS.

Under this heading medals commemorating executions should be included, such as those struck on the execution of Monmouth and Argyle in 1685, with the inscription, "*Ambitio malesuada ruit*," and those struck on the execution of Grandval in 1692. Amongst medals and jettons of various countries commemorating executions (as just or unjust acts), some of the most notable were issued in the Low Countries during the sixteenth and seventeenth centuries. On certain other medals death is *threatened* as a punishment or means of reprisal. Thus, on two English medals (described later on) commemorating the loss of Minorca in 1756, the obverse inscription is, "Brave Blakney reward, But to B. (Admiral John Byng) give a cord." These medals belong to the popular ("toy-shop") class,⁴⁷ and may really have helped in bringing the unfortunate Admiral Byng to his death. Certain tradesmen's tokens (chiefly halfpennies) of the last years of the eighteenth century, representing a man hanging from a gallows, with the

⁴⁷ The popular or "toy-shop" medals (mostly more or less political) of the period constitute the class best known through the Admiral Vernon and Porto Bello medals of 1739, of which a great many varieties exist. If English history had to be made out by the evidence of medals only, then Admiral Vernon would perhaps figure as the most important personage. These "toy-shop" medals served the purpose of political newspapers; they were, in fact, "medallic newspapers," if the expression is permitted. At the end of the century (about 1795), penny, half-penny, and farthing tradesmen's tokens were sometimes made to serve a similar political purpose.

punning inscription, "End of pain," though they did not cause the death of Thomas Paine, may yet have helped to prejudice the English people against him. On a small cast bronze medal, signed by the French sculptor, P. J. David d'Angers, commemorating the so-called "Massacres of Gallicia" (revolt in Austrian Poland) in 1846, the reverse bears the representation of a gallows and the names of those who were regarded as responsible for the "massacres." I do not know of any medals referring to the idea of death (voluntary or involuntary) as an act of atonement—apart, of course, from religious medals. The unpleasant subject of the fancied terrors of death and hell has naturally been much more illustrated on engravings, drawings, and paintings than on medals, engraved gems, &c.⁴⁸ Emblems of the Death's head class, when employed to inspire terror in certain cases and in certain ways, may be supposed to have exercised a panic-striking effect similar to that produced (according to stories of former days) when pirates ran up their Death's head ensign, the hoisting of the flag causing doubtless an equivalent sinking of the blood-pressure and courage in some of those who looked at it.⁴⁹

For convenience all medals, memorial rings, &c., commemorating political executions and political murders, may be included under this heading, though some of

⁴⁸ Certain satirical medals might be mentioned here, especially the English political ones of the toy-shop class (see previous footnote), issued in 1741, representing the devil leading Sir Robert Walpole by a rope round his neck towards the open jaws of a monster (hell), with the inscription: MAKE · ROOM · FOR · SIR · ROBERT — NO · EXCISE. (See *Medallic Illustrations*, 1885, vol. ii. p. 561, Nos. 190-192.)

⁴⁹ Such a use of the symbols of death is analogous to the employment during warfare of war-paint (and terrifying devices of all kinds) by savage tribes, in former times by aboriginal races of North America, &c.

them (*e.g.* medals commemorating the death of John van Olden Barneveldt in 1619, and of the brothers De Witt in 1672) might also be classed under Heading XI. in so far as they commemorate a kind of martyrdom for political principles. Memorials of this class, owing to their number, cannot all be described here, but we may instance the Roman denarius commemorating the murder of Julius Caesar; certain coins of Athens bearing a representation of the so-called tyrannicides Harmodios and Aristogeiton (the statue of them by Kritios and Nesiotes); the medals commemorating the Pazzi conspiracy (1478) at Florence and the assassination of Giuliano de' Medici; the medal on the murder of Alexander de' Medici, the first Duke of Florence, by his kinsman Lorenzino de' Medici, the "Tuscan Brutus," in 1537; the medals, medalets, and other memorials on the execution of King Charles I of England, and on the execution of Louis XVI of France and Marie Antoinette; also memorial medals on the other victims of the great French Revolution, and of various other revolutions in France and other countries.

VI. DEATH AS AN EMBLEM OF STUBBORN PURPOSE IN WAR.

Death's heads have been used as military devices in Germany, France, and England. The device was apparently first adopted by the Prussian "Black Hussars," who were brought into existence by Frederick the Great in 1741. They wore a black uniform and a Death's head instead of a cockade. The "Black Brunswickers," raised in 1809 by Friedrich Wilhelm, Duke of Brunswick-Oels, were likewise given a black uniform with a Death's head as their badge, partly, it is said, as

a token of mourning for the previous duke, who was mortally wounded at the battle of Auerstadt (October 14, 1806), in the war against Napoleon.⁵⁰ A little bronze Death's head, worn by the Black Hussars on their shakos during the war of 1815 against Napoleon, is illustrated (see Fig. 6). In France a skull and crossed bones constituted the badge of the 9th Regiment of Hussars, which was formed in March, 1793, out of the second corps of "hussards noirs du nord." The device was apparently copied from that of the Prussian Black



FIG. 6.—Bronze death's-head badge (natural size), worn on the shakos of the Prussian Black Hussars in 1815.



FIG. 7.—"Death or Glory" brass badge (natural size), worn on the head-dress of the English 17th Lancers.

Hussars. The English 17th Lancers wear as a badge on their head-dress and collar a skull and crossed bones, with the words "or glory" below (see Fig. 7). The object of this device ("Death or Glory"), which was introduced at the suggestion of Lieutenant-Colonel John Hale in 1759 (who was Lieutenant-Colonel Commandant of the newly formed corps), was to create emulation, and

⁵⁰ The German regiments which at the present day represent the Black Brunswickers and the Black Hussars, continue to wear a Death's head device.

to commemorate the glorious death of General Wolfe at Quebec (1759).⁵¹ Victorious fighting and life are more valuable in a war than martyr-like death, and so it is not really surprising that words such as, "Pro patriâ mori, vivere est" (cf. Horace's "Dulce et decorum est pro patriâ mori"), or "Pro religione mori" or "Pro libertate mori, vivere est," have not found favour on military badges. Sentences of this kind do indeed appear on some medals and medalets, which, however, as they commemorate patriotic deeds, should be classed under Heading XI.

VII. DEATH AS AN EMBLEM OF DESTRUCTION AND RUIN.

In regard to the skull and bones as an emblem of danger, destruction, and ruin, there are satirical medals, as there are satirical prints, especially political cartoons, on which Death's heads are introduced to suggest the unsound, dangerous, or destructive nature of certain customs, occupations, or enterprises. Thus, on the occasion of a *fête* given in 1875, when Samuel Plimsoll (1824-1898), "the sailors' friend," was elected Member of Parliament for Liverpool, those present wore a medalet with Plimsoll's portrait on the obverse, and one of the so-called "coffin-ships," a species of death-trap which he helped to get rid of, on the reverse. The ship is represented sinking; on one of its sails is pictured a Death's head with crossed bones; in the exergue are the words COFFIN SHIP.

⁵¹ Vide Major J. H. Lawrence Archer, *The British Army; its Regimental Records, Badges, Devices, &c.*, London, 1888, p. 77. I am indebted to Mr. L. Forrer for this reference.

A sixteenth-century plaque will afterwards be described, representing Death standing in an attitude of fear or submission before Valour ("Virtus"); by which device it was possibly intended to signify that threatening peril and ruin in an enterprise, or imminent defeat and death in war, might sometimes be successfully resisted and averted by courage.

VIII. DEATH AS LEVELLER OF ALL MANKIND.

"All go unto one place; all are of dust, and all turn to dust again" (Ecclesiastes, ch. ii. 20). Death awaits all alike and makes all equal. Glory, wealth, beauty, and pride of birth make no difference in the end. "Mors omnibus communis est;" "Mors sceptrā ligonibus aequat;"⁵² "Pallida mors aequo pulsat pede pauperum tabernas Regumque tures" (Horace, *Od.*, i. 4, 13). This aspect is illustrated by various memorial medals on great personages bearing inscriptions such as, "Finis gloriae mundi;" "Sic transit gloria mundi," &c. A medal of the seventeenth century, by Christian Maler, has on the obverse a lady's portrait, and on the reverse a skeleton with the inscription, "Sic nunc, pulcherrima quondam."⁵³

⁵² This sentence, said to be a quotation from Lucan, was inscribed over a fourteenth-century mural painting (representing "les trois morts et les trois vifs"), which formerly existed at Battle Church, Sussex. An English equivalent occurs in James Shirley's *The Contention of Ajax and Ulysses* (1659)—

"Sceptre and crown
Must tumble down,
And in the dust be equal made
With the poor crooked scythe and spade."

⁵³ Compare H. S. Beham's engraving (dated 1541) of Death and a lady, with the inscription, "Omnem in homine venustatem mors abolet."

The type of this medal was apparently copied from a Danish medal dated 1634 (to be afterwards described), which on the obverse bears a similar lady's portrait and words signifying, "I am beautiful," whilst on the reverse is a skeleton with words meaning, "I was beautiful." Such medals may be compared to a certain class of sepulchral monuments (for instance, that of Archbishop Chichele, which will be referred to later on) representing the deceased with all the attributes of worldly wealth and power, and (on a lower slab or compartment) a skeleton or emaciated decaying body, often being "eaten by worms."

It has been suggested that the great popularity in Europe (perhaps especially in Germany) of "Dance of Death" designs, during the fifteenth and sixteenth centuries may be partly accounted for by the discontent of the lower classes under the feudal system of the period (cf. the history of the Anabaptist "levellers" of Germany, 1521-1525). Such pictures reminded the peasants that at death rank and social distinctions would disappear, peasant and nobleman, poor and rich, would fare alike. The fact that death is the common lot of all mankind ("For dust thou art, and unto dust shalt thou return," Genesis, ch. iii. 19) could be distorted into a socialistic argument comparable with that suggested by the fourteenth-century rhyme:—

"When Adam dived and Eve span,
Who was then the gentle man?"

(attributed to John Ball, executed at St. Albans in 1381). The consideration that death is a natural consequence of birth, and common to all living creatures, offers a kind of consolation to every one. This aspect

of death is therefore, to some extent, also a consolatory one.

IX. SCIENTIFIC ATTITUDE TOWARDS DEATH. THE INVESTIGATION OF ITS CAUSES, &c.

"Nec silet mors" was the motto of the Pathological Society of London on its foundation in 1846. Death, however much grief it causes, will often, if properly questioned, teach us something about the cause, course, and prevention of a disease, which may be helpful for the preservation of human life and health. The Cheselden and Bristowe prize-medals of St. Thomas's Hospital, London, bear to some extent on this aspect of death, especially the former and more beautiful of the two, on which is the inscription, "Mors vivis salus." The equally beautiful Fothergillian medal of the Royal Humane Society (London) may likewise be mentioned in this connexion, since a specimen struck in gold, now in the British Museum, was awarded in 1845 to Sir John Erichsen for his "Experimental Enquiry into the Pathology and Treatment of Asphyxia."

X. MEDICAL AND SOCIAL ATTITUDE TOWARDS DEATH. THE PREVENTION OF UNNECESSARY DEATH.

Various commemorative medals of medical men and their life-work, and medals relating to sanitation and public health, illustrate to some extent this attitude towards death. Certain coins of Selinus in Sicily (of the period *circa* 466-415 B.C.) may likewise be referred to in the same connexion, since their types commemorate the freeing of Selinus from a pestilence of some kind

(malaria?) by the drainage of the neighbouring marshlands. They therefore illustrate a grand and public-spirited "hygienic" attitude towards preventible death from endemic infectious disease in the fifth century B.C.

A not uncommon device which specially belongs here is that of a skeleton-like figure (representing death or disease) being withheld or driven back as the result of hygienic work or medical skill and devotion; for instance, the obverse design on the military-like medals awarded to all those who helped in sanitary work, &c., during the epidemic of bubonic plague in Hong-Kong, 1894. Similarly, Aesculapius is represented warding off a figure of death on a medal commemorating the epidemic of cholera in Paris, 1832. Medals relating to the saving of life at great personal risk are best grouped under Heading XI.

XI. DEATH FOR THE GOOD OF OTHERS,⁵⁴ OR FOR THE SAKE OF ORDINARY DUTY OR HONOUR. MARTYR- DOM FOR RELIGIOUS, PATRIOTIC, POLITICAL, OR SOCIAL OPINIONS.

As illustrating this aspect of death, all medals commemorating heroic deeds of life-saving, or attempted life-saving, might be included, as well as the various medals and decorations awarded to those who have risked their

⁵⁴ This aspect of death, like No. XIV., may be termed an "altruistic" aspect of death. Strictly speaking, all coins and medals with representations or symbols of the Crucifixion of Jesus Christ might be placed under this heading. (Cf. especially the so-called "Wittenberger Pestthalers" of the sixteenth century, with Moses' brazen serpent on the obverse and the Crucifixion on the reverse. Cf. also the fine sixteenth-century medals by Hans Reinhard of Leipzig, representing the Crucifixion.) To a certain extent the aspect of death from the so-called "Epicurean" point of view (No. XII.) may be contrasted as egotistic.

lives in defence of, or in helping, others. (In this connexion, however, it may be noted that in so far as the death of the individual man is necessary for the progress of the race, the natural death of every one may, in a kind of way, be regarded as a sacrifice or involuntary martyrdom for posterity.)

Intimately allied is the subject of death for the sake of ordinary duty, or for the sake of what is rightly or wrongly supposed to be honour. King Francis I of France, after the battle of Pavia (1525), is said to have written: "Tout est perdu, fors l'honneur" ("All is lost except honour");⁵⁵ but in reality life, and with it hope, remained. When honour is all that is saved, there is seldom a voice to tell the tale, or a hand to write it, or an artist to celebrate it on a medal. A sixteenth-century medal of Faustina Sforza, wife of the Marquis of Caravaggio Muzio, has a reverse design and legend signifying: "It is preferable to die than to dishonour one's self by committing a disgraceful action."⁵⁶ Two Italian medals of about 1500 bear an inscription having a similar significance: "Prins mori qua(m) turpari." With these might be compared the reverse inscription on two other medals: "Potius mori quam animo immutari," if the change of mind referred to were intended to imply cowardice. A sixteenth-century finger-ring, referred to later on, has the inscription, "Rather death than fals fayth;" and a ring supposed to have belonged to a Knight Hospitaller of Winckbourne, is inscribed,

⁵⁵ The actual passage in his letter was: "De toutes choses ne m'est demouré que l'honneur et la vie qui est sauve" (J. A. Dulaure, *Histoire physique, civile et morale de Paris*, 4th edition, Paris, 1829, vol. iv. p. 85).

⁵⁶ Cf. Tacitus, *Vita Agricola*, xxxiii.: "Honesti mors turpi vita potior" ("An honourable death is better than a disgraceful life").

"Mieu mori que change ma foi" ("Better to die than change my faith").

Under this heading should belong all medals (and similar memorials) on the death of those who have undergone martyrdom for their religious,³⁷ patriotic, political, or social opinions. We may instance the medals on the death of John Huss in 1415, of French Huguenots in 1572 and 1685, of Archbishop Affre at Paris in 1848, of John van Olden Barneveldt (political) in 1619, and of the brothers De Witt (political) in 1672. For convenience, however, medals commemorating political executions like that of Barneveldt, and political murders like that of the De Witts, whether there be an element of martyrdom about them or not, have been included under Heading V.

Strictly speaking, all medals and similar memorials connected with patriotism may likewise be admitted here, including those commemorating individuals who have risked or lost their lives in fighting for or defending the real or fancied interests of their country. It is remarkable how few numismatic memorials there are of the great patriotic heroes of Greek and Roman history and legend, though patriotism in ancient Greece and Rome was probably considered the highest of all virtues.

³⁷ In regard to devices which have been supposed to relate to martyrdom, a curious instance of mediæval misinterpretation of an antique gem-type may be mentioned. An antique engraved gem in the British Museum, which King describes as representing the Muse Thalia, seated, contemplating a comic mask, with a young faun balancing himself on a pedestal before her, was apparently in mediæval times supposed to represent Herodias gloating over the severed head of St. John the Baptist, whilst her daughter Salome practised her steps. The mediæval silver setting of this antique gem bears the inscription, IE SVI SEL DE AMYR LEL (I am the seal of loyal love). (See C. W. King, *Handbook of Engraved Gems*, second edition, 1885, Pl. xxxv. No. 1.)

The legendary patriotism and good faith of M. Atilius Regulus is not commemorated on any of the coins of the Roman Republic struck by members of the gens Atilia. So, also, we look in vain to (genuine) coins for representations of M. Curtius, Horatius Cocles, and other legendary heroes of Roman patriotism. A silver denarius struck by L. Manlius Torquatus (who was quaestor in 104 B.C.) bears on the obverse a torque (torques) surrounding the head of the goddess Roma. This is an allusion to the famous exploit of T. Manlius Imperiosus Torquatus, who, in the war against the Gauls (361 B.C.), killed a gigantic Gaul in single combat, and obtained the surname of Torquatus from wearing the torque taken from the dead body of his adversary. Here, however, we touch upon the large class of medals commemorating deeds of valour of various kinds. Such medals are, of course, too numerous to be included in the present paper.

In regard to coins of certain Greek towns bearing the portrait of the deified Antinous it should be noted under the present heading that, according to some accounts, Antinous gave up his life for the sake of the Emperor Hadrian.

Amongst medals commemorating deaths for patriotism and military duty in relatively modern times there are those of James Wolfe and the capture of Quebec (1759), Nelson and the battle of Trafalgar (1805), and Sir John Moore at Corunna (1809), and a vast number of medals and jettons of the military and naval heroes of all countries. A medal on the death of Marshal Schomberg at the battle of the Boyne (1690) has on its edge the inscription: "Pro religione et libertate mori, vivere est."

Bronze medallions, plaques, engraved gems, and finger-rings representing the early Roman legend of the

suicide of Lucretia might perhaps also be regarded as illustrating one side of this aspect of death. An Italian niello ring of the fifteenth century, figured in Thomas Wright's introduction to Fairholt's *Miscellanea Graphica* (London, 1856, p. 75), from the Londesborough Collection, bears a representation of Lucretia holding a dagger to her breast, doubtless emblematic of chastity and honour.⁵³

XII. THE "EPICUREAN" ATTITUDE TOWARDS DEATH.

The debased Epicureanism of so-called followers of Epicurus in Roman times has been already alluded to, and Roman gems exist engraved with *memento mori* devices, plainly advocating present enjoyment of the sensual pleasures of life. "Eat, drink, and enjoy life to-day, for to-morrow you may die;" or, as Philip Doddridge (in part of his epigram on the motto attached to his family arms, "Dum vivimus vivamus") has put it—

"‘Live while you live,’ the epicure would say,
‘And seize the pleasures of the present day.’"

⁵³ Thomas Wright, speaking of this Londesborough ring, notes an allusion by Shakespeare (*Twelfth Night*, act ii. scene 5) to the use of a signet representing Lucretia. Malvolio, opening a letter which he thinks is from his mistress, says, "By your leave, wax—Soft!—and the impressure her Lucrece, with which she uses to seal." Representations of Lucretia were popular in the fifteenth and sixteenth centuries as emblems of chastity and honour. An Italian engraving (sixteenth century) of Lucretia, by Marcantonio Raimondi, bears the inscription, "Ἀμείνον ἀποθνήσκειν ἢ αἰσχρῶς ζῆν" ("Better to die than to live disgracefully"). There exist many Italian silver finger-rings and pendants of the fifteenth and sixteenth centuries, ornamented with a conventional female portrait in niello almost exactly like that on the above-described Londesborough ring, but without the dagger. In all probability these conventional portraits, though without the dagger, and often of careless workmanship, were accepted at the time as "Lucretias" (cf. the above-quoted passage from Shakespeare's *Twelfth Night*), that is to say, as emblems of chastity and honour.

XIII. MINDFULNESS OF DEATH, AND A CLOISTERED LIFE OF CONTEMPLATION.

A life of contemplation and quiet study in a cloister, withdrawn from worldly passions and ambitions, calmly awaiting and ever mindful of the coming of death, was a monkish ideal of former times. The contrast between the life of the religious recluse and an ordinary worldly life is pictorially expressed in the well-known fresco of the fourteenth century (already alluded to) known as the "Triumph of Death" in the Campo Santo of Pisa. The *memento mori* design on the reverse of an Italian medal of the fifteenth century, by Giovanni Boldu, apparently suggested the design of a marble medallion which I have seen on the façade of the famous Church of the Carthusian Monastery (Certosa) near Pavia, though the legend, "Innocentia et memoria mortis," was substituted for that on the medal ("Io son fine"). The inscriptions, "Mors omnibus aequa" and "Vita est meditatio," on a Danish memorial medal of George Hojer (1670), were obviously meant to suggest that a contemplative life is the best means of preparing for, and being ready for, death, which no one can escape.

XIV. MINDFULNESS OF DEATH AS AN INCENTIVE TO RIGHT LIVING, HELPING OTHERS, AND MAKING THE BEST ACTIVE USE OF LIFE.

"Teach us to remember that we must die, so that we may become wise" (Psalm xc. 12, after Luther's translation); "In all thy matters remember thy last end, and thou shalt never do amiss" (Ecclesiasticus, Revised

Version, ch. vii. 36); "Remember thy last end, and cease from enmity" (*ibid.*, Revised Version, ch. xxxviii. 6); "Whatsoever thy hand findeth to do, do it with thy might; for there is no work, nor device, nor knowledge, nor wisdom, in the grave, whither thou goest" (Ecclesiastes, ch. ix. 10). The above-mentioned quotation from the 90th Psalm occurs on a Danish medal, dated 1634, which will be described later on. Life may well be regarded as a period during which man should make the best use he can of his strength, his light, and his free will (however little the last may be), before the darkness of death overtakes him. This attitude towards death should be contrasted with those attitudes that suggest a merely contemplative life and withdrawal from worldly cares and temptations (XIII.) or that suggest a life devoted to sensual pleasure (XII.). It tends to induce a life, not of selfish idleness or sensual pleasure, but of activity and utility.⁵⁹

As illustrating the particular aspect (of life) and death under consideration, we may refer to medals and medalets of physicians or medical societies, inscribed with the famous Hippocratic aphorism: 'Ο βίος βραχύς, ἡ δὲ τέχνη

⁵⁹ W. E. H. Lecky (*History of European Morals*, 1905 edition, vol. i. p. 203) wrote: "A life of active duty is the best preparation for the end, and so large a part of the evil of death lies in its anticipation, that an attempt to deprive it of its terrors by constant meditation almost necessarily defeats its object, while at the same time it forms an unnaturally tense, feverish, and tragical character, annihilates the ambition and enthusiasm that are essential to human progress, and not unfrequently casts a chill and a deadness over the affections." Living a life of activity and utility, such as that referred to under XIV., might be called "the best form of Epicureanism," were it not that the word "Epicureanism" in this connexion might be supposed to signify that the attainment of pleasure is the prime motive, rather than merely a frequent and agreeable consequence or accompaniment, of the active life. ("Non dux, sed comes voluptas.")

uaxpi"⁶⁰ (as on a medal commemorating the foundation of the Medical Association of Warsaw, 1809), or its Latin translation, "*Ars longa, vita brevis*" (as on a medal of J. H. Pozzi, 1697-1752, poet and physician of Bologna, and on another of Dr. C. G. B. Daubeny, 1795-1867, of Oxford).

A memorial medal of the reign of Christian III of Denmark bears an inscription similar to those seen on old sun-dials, "*Bedenck das Endt und die Stunde*" ("Remember the end and the hour,"⁶¹ that is to say, do not waste precious hours), recalling the words of Thomas à Kempis (1380-1471): "*Memento semper finis, et quia perditum non redit tempus*" (Book I. ch. 25. 11). A little gold enamelled coffin-shaped pendant in the British Museum bears the words, "*Cogita mori ut vivas*," i.e. "Think of dying, that you may live (properly in this world, and thus obtain everlasting life)." "Live to die" is one of many similar inscriptions to be found on old memorial finger-rings. The thought of death as an inducement to help others is well illustrated by many medals to the "pious memory" of founders of, and donors to, colleges, hospitals, and other philanthropic and charitable institutions.⁶²

⁶⁰ "Art is long, and time is fleeting" (Longfellow's *Psalm of Life*): "Ach Gott! die Kunst ist lang, und kurz ist unser Leben" (Goethe's *Faust*).

⁶¹ Under the present heading (XIV.) the familiar "*Respecte finem*" might be replaced by "*Respecte vitam*." It is not so much "Think of the end," as "Think of the shortness of life, and make active use of the time you have," or, as Benjamin Franklin (*Pennsylvania Almanac*, 1758) said, "Dost thou love life? Then do not squander time, for that is the stuff life is made of."

⁶² This attitude towards death is to some extent illustrated by the following much-quoted epitaph lines:—

"That I spent, that I had;
That I gave, that I have;
That I left, that I lost."

XV. DEATH AS "LOVE," OR THE "CROWN OF LIFE."

Somewhere or other the angel of death has been pictured conducting away a human soul, who in the gloom recognizes the face of the messenger, transformed from that of death to that of love. One has to acknowledge that deaths, like births, are both necessary and beneficial for the progress of the human race. Therefore, in a kind of way, natural death may be regarded as a manifestation of divine love. It seems as if death and decay are as necessary for life and growth as the existence of pain and sadness is for pleasure and gladness, grief for joy, misery for happiness, evil for good, opposition for valour,⁶³ vice

Of this epitaph-inscription there are various versions, the earliest being the Courtenay one of the fifteenth century. Vide the correspondence in the *Standard*, London, December 14, 1897. The same idea is suggested by the mediæval doggerel, already referred to: "O dominus dives, Non omni tempore vives; Fac bona dum vivis, Post mortem vivere si vis." Compare the following epitaph-advice (1593): "Lyve well and Dye never, Dye well and Live ever;" also the more ordinary, "Vive ut vives in vitam æternam."

⁶³ The motto, "Marcet sine adversario virtus," appears on the reverse of three medals which have been published as of the fifteenth century, vide A. Armand, *Les Médailleurs Italiens*, 2nd edition, Paris, 1883, vol. ii. pp. 51, 74, 85. Mr. G. F. Hill has, however, kindly pointed out to me that only the last of these is genuine, namely, the medal by Jean de Candida (see H. de la Tour, *Revue Numismatique*, Paris, 1894, 3rd series, vol. xii. p. 327, and pl. viii.), of his friend and patron, Robert Briçonnet, French statesman and Archbishop of Reims, who died in 1497. I have been able to examine one of the supposed medals of Francesco Accolti (Armand, *loc. cit.*, vol. ii. p. 51). In the production of that piece probably a plaster cast of the medal of Robert Briçonnet served as the foundation. In the plaster cast the portrait on the obverse could then be slightly altered, the legend changed to FRAN · ACCOLTIVS · ARET ·, and the date (1455) added (incuse) below the bust. From the plaster cast thus altered a sand-casting in bronze could easily be obtained. To some extent the medal of Briçonnet may be taken as suggesting the doctrine of progress by struggle. Resting (as Luther thought) easily leads to rusting. By the laws of evolution

for virtue, pessimistic ideas for optimistic ideas, darkness for light, negative electricity for positive electricity ; a consideration which throws some light on the "mystery" of pain, misery, and death. It is difficult to believe that anything necessary and beneficial for the race would not appear kind and beneficial to the individual also if only he were able to understand everything about it. I have not, however, come across any medal or jewel illustrating exactly this aspect of death.

Of course, to those who believe in a future existence, especially to those who incline to the doctrine of a gradual evolution of souls by passage through the trials of life, natural death (but rarely if ever suicide) may sometimes appear as a reward for troubles bravely borne,—in fact, as the "crown of life" (Edward Young, *The Complaint*, 1742); though the latter expression is usually applied to events of life other than its termination. The idea of the martyr's "celestial crown" (cf. certain memorial medals, rings, &c., of King Charles I of England, to be described later on) is, of course, a distinctly different one.

XVI. PREDESTINATION AND FREE WILL IN REGARD TO ASPECTS OF DEATH.

F. PARKES WEBER.

the only alternative to idleness with regression is activity with progression. Practically no middle course is possible. Amongst expressions relating to the dualistic idea of good and evil, such as "No roses without thorns," is "Nulla sine merore [maerore] voluptas" ("No pleasure without sadness"), which appears as the motto of Georg Gisze (a Basel merchant "of the Steelyard" in London) on his magnificent portrait, dated 1533, by Holbein, now in the Picture Gallery of the Old Museum at Berlin.

(To be continued.)

XX.

MEDALS COMMEMORATIVE OF VICE-ADMIRAL EDWARD VERNON'S OPERATIONS, 1739 TO 1741.

THE interest shown in the very extensive series of medals relating to Admiral Vernon's expedition to the South American colonies in 1739-1741 has induced me to examine those which are in my collection. I have compared them carefully with the descriptions in the *Medallic Illustrations* published by the Trustees of the British Museum, and also with those in C. Wyllys Betts' *American Colonial History illustrated by Contemporary Medals* (1894), and have found a good many varieties, which it may be useful to place on record as a guide to collectors. The differences are in many cases small, but these only prove how numerous are the examples, and what a number of dies must have been made. I understand that of late the British Museum has made considerable additions to this series of English medals. It is, therefore, possible that some of the varieties which I describe may have found their way into the National Collection.

DESCRIPTION OF MEDALS.

(Unless otherwise stated, the figure or bust described is that of Vernon.)

PORTO BELLO TAKEN, 1739.

1. *Obv.*—Bust, *r.*, bareheaded, hair twisted in queue. On truncation: *T.* No line enclosing legend. *Leg.* ADMIRAL · VERNON · TOOK · PORTO · BELLO.

Rev.—View of the port. Six ships placed in two diagonal lines, rising to *r.* Upper 3 sailing *r.*, lower 3 *l.* Water, lines coming to lower edge of medal. No line enclosing legend. *Leg.* WITH · SIX · SHIPS · ONLY · NOV · 22 · 1739. Stops on both sides ∴.

1·55. Æ (gilt).

2. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing at DM. Line enclosing legend. *Leg.* ADMIRAL · VERNON · TOOK · PORTO · BELLO.

Rev.—View of the port. Six ships placed 2 and 4. 4 sailing *r.*, 2 *l.* Line enclosing legend. *Leg.* WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 1739. Stops on both sides ∴.

1·55. Æ (gilt).

3. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing between D and M. Line enclosing legend. *Leg.* ADMIRAL · VERNON · TOOK · PORTO · BELLO.

Rev.—View of the port. Six ships, placed 2 and 4, 2 sailing *l.*, 4 *r.* Line enclosing legend. *Leg.* WITH · SIX · SHIPS · ONLY. *Ex.* NOV 22 1739. Stops on both sides ∴.

1·6. Æ.

4. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing between D and M. Line enclosing legend. *Leg.* ADMIRAL · VERNON · TOOK · PORTO · BELLO.

Rev.—View of the port. Six ships, placed 2, 1 (on right),
3. 1 sailing *r.*, 5 *l.* Line enclosing legend.
Leg. WITH · SIX · SHIPS · ONLY. *Ex.*
NOV 22 1739. Stops on both sides :—
1·35. *Æ.*

5. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers
of right pointing just to left of A. Line enclosing
legend. *Leg.* ADMIRAL · VERNON ·
TOOK · PORTO · BELLO.

Rev.—View of the port. Six ships placed 2, 1 (on left),
3. One sailing *r.*, 5 *l.* Line enclosing legend.
Leg. WITH · SIX · SHIPS · ONLY · 68!!
(stops :·) *Ex.* NOV 22.
1·05. *Æ.*

6. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers
of right pointing between I and T. Line enclosing
legend. *Leg.* THE · BRITISH · GLORY ·
REVIV · D · BY · ADMIRAL · VERNON.
Scroll.

Rev.—View of the port. Six ships placed 2 and 4. 5
sailing *r.*, 1 *l.* Line enclosing legend. Sym-
metrical scroll, with central branch below date.
Leg. HE · TOOK · PORTO · BELLO ·
WITH · SIX · SHIPS · ONLY. *Ex.* NOV ·
22 · 1739.
1·5. *Æ.*

7. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers
of right pointing at E, left elbow at last N.
Line enclosing legend. *Leg.* THE · BRITISH ·
GLORY · REVIV · D · BY · ADMIRAL ·
VERNON (stops o)

Rev.—View of the port. Six ships placed 1, 1, 2, 2.
The upper one stern on, 2 sailing *r.*, 3 *l.* Line
enclosing legend. *Leg.* HE · TOOK · PORTO ·
BELLO · WITH · SIX · SHIPS · ONLY ·
1739 · (stops o) *Ex.* BY COURAGE · AND |
CONDUCT.

1·45. *Æ.*

8. *Obv.*—Half length figure, facing, $\frac{3}{4}l$, baton in left, fingers of right pointing to B. Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL (*sic*) · VERNON (stops o)

Rev.—View of the port. Six ships placed 2, 1 (on right), 3. One sailing *l*, 5 *r*. Line enclosing legend. *Leg.* WHO · TOOK · PORTO · BELLO · WITH · SIX · MEN · OF · WAR · ONLY. *Ex.* NOV · 22 · 1739.

1·5. Æ.

9. *Obv.*—Half length figure, facing, $\frac{3}{4}l$, baton in left, fingers of right pointing to right of B. Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON.

Rev.—View of the port. Six ships, 3 sailing diagonally *r*., 2 below also *r*., 1 (on right) *l*. Line enclosing legend. *Leg.* WHO · TOOK · PORTO · BELLO · WITH · SIX · MEN · OF · WAR · ONLY. *Ex.* NOV 22 1739.

1·5. Æ.

10. *Obv.*—Half length figure, facing, $\frac{3}{4}l$, baton in left, fingers of right pointing at R. Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON o (stops ∴)

Rev.—View of the port. Six ships irregularly placed. Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 · 1739 (all stops o)

1·45. R.

11. *Obv.*—Half length figure, facing, $\frac{3}{4}l$, baton in left, fingers of right pointing between R and I. Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL VERNON (stops o)

Rev.—Same as preceding.

1·45. Æ.

12. *Obv.*—Same as preceding.

Rev.—View of the port. Six ships placed 1, 2 and 3. The largest sailing *r.*, remainder *l.* Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY · *Ex.* NOV · 22 · 1739 · (all stops o)

1·45. Æ.

13. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing between R and I. No line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON (stops o)

Rev.—View of the port. Six ships placed 3 and 3. Upper 3 sailing *l.*, lower *r.* No line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY · *Ex.* NOV · 22 · 1739 (all stops o)

1·45. Æ.

14. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing to E of THE. Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON.

Rev.—View of the port. Six ships irregularly placed. Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY · *Ex.* BY · COURAGE · AND · CONDUCT.

1·45. Æ.

15. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing at RI. No line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON.

Rev.—View of the port. Seven ships, placed 3 and 3, with one on extreme left. No line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY · *Ex.* NOV · 22 1739.

1·45. Æ.

16. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing at E. Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL VERNON (*sic*) (stops o, not ∴ as given by Betts).

Rev.—View of the port. Six ships, 3 large and 3 small, irregularly placed. Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* BY · COURAGE · AND | CONDUCT.
1·45. Æ. Betts, 217 (variety).

17. *Obv.*—Half length figure, facing, $\frac{3}{4}l.$, baton in left, fingers of right pointing at E. Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON. (stops o)

Rev.—View of the port. Six ships, placed 1, 1, 2 and 2. The upper stern on. Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY · 1739 · (stops o) All O's too big. *Ex.* BY COURAGE o AND | CONDUCT.
1·45. Æ.

18. *Obv.*—Full length figure, *l.*, standing on platform, baton in right hand, left on the hip. Ship *r.*, Cannon *l.* Line enclosing legend. *Leg.* THE BRITISH GLORY REVIV D BY ADMIRAL VERNON.

Rev.—View of the port. Six ships, placed 1, 2 and 3, all sailing *r.* Line enclosing legend. *Leg.* WHO TOOK PORTO BELLO WITH SIX SHIPS ONLY. *Ex.* NOV 22 1739.
1·45. Brass.

19. *Obv.*—Full length figure, *r.*, standing on the carriage of a cannon prolonged into a single leaf. Sword in right, baton in left. Cannon *r.*, Ship *l.* Line enclosing legend. Ornament below: concave shell; on each side 2 separate branches carrying a leaf at each end. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL VERNON.

Rev.—View of the port. Six ships, placed 2 and 4, all sailing *l.* Line enclosing legend. *Leg.* WHO · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 · 1739. Below, 2 leaves curving outwards.
1·45. Brass.

20. } Varieties of preceding, differing only in the leaf orna-
21. } ments on both sides.
22. }

23. *Obv.*—Full length figure, *r.*, standing on the carriage of a cannon prolonged into a single leaf. Sword in right, baton in left. Cannon *r.*, Ship *l.* Line enclosing legend. Ornament below: convex shell, branch with 5 leaves each side. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL VERNON.

Rev.—View of the port. Six ships, placed 1, 2 and 3, all sailing *r.* Line enclosing legend. *Leg.* WHO · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* · NOV 22 1739.
1·45. Æ.

24. *Obv.*—Full length figure, *r.*, standing on lines forming ground; sword in right, baton in left. Cannon *r.*, Ship *l.*, bowsprit pointing at *s* in BRITISH. Line enclosing legend extending entirely around. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON.

Rev.—View of the port. Six ships, 2 and 4, all sailing *l.* Line enclosing legend. *Leg.* WHO · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 · 1739. Below: two branches with 2 leaves on each.
1·45. Æ.

25. *Obv.*—Full length figure, *r.*, standing on lines forming the ground; sword in right, baton in left. Scabbard showing below coat behind. Cannon *r.*, Ship *l.*, sailing *l.*, bowsprit to *S.* Line enclosing legend extending entirely around. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON. Scroll ornament within the annular space between beginning and end of legend.

Rev.—View of the port. Six ships, placed 2 and 4, all but right hand one in lower line sailing *r.* Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 · 1739. Scroll ornament below.

1·45. Brass.

26. *Obv.*—Full length figure, $\frac{3}{4}$ *r.*, standing on edge of medal. Sword in right, baton in left, cannon, pointing *r.*, on ground behind him, small ship *l.* in line with hand. Line enclosing legend, dividing it into two separate parts. *Leg.* THE · BRITISH · GLORY · REVIVD · (*head*) BY · ADMIRAL · VERNON.

Rev.—View of the port. Six ships, placed 2, 1 *r.*, 3, all sailing *l.* No small vessels or boats in port. Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 · 1739. Symmetrical leaf ornament below.

1·05. Æ.

27. *Obv.*—Full length figure, *r.*, standing on solid platform; sword in right, baton in left, scabbard projecting below coat behind. Scroll ornament below platform. Cannon *r.*, Ship *l.*, sailing *r.* Line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON. (*N*'s reversed.)

Rev.—View of the port. Six ships, placed 2, 1, 3, all sailing *r.*, except the single one. Line enclosing legend. *Leg.* HE TOOK PORTO BELLO WITH SIX SHIPS ONLY. *Ex.* NOV · 22 · 1739. (All *N*'s reversed.)

1·5. Æ.

VERNON AND BROWN.

28. *Obv.*—Two full length figures: Vernon *l.*, facing, $\frac{3}{4}$ *r.*, sword in right, his left holding the right hand of Brown, who faces $\frac{3}{4}$ *l.* Between them, above the royal crown, below, a ship. Line enclosing

legend. *Leg.* THE · BRITISH · GLORY ·
REVIV · D : BY · ADM · L · VERNON :
COMR · BROWN.

Rev.—View of the port. Six ships, placed 2, 1 *r.*, 3,
all sailing *r.* Line enclosing legend. *Leg.*
+ HE · TOOK · PORTO · BELLO · WITH ·
SIX · SHIPS · ONLY · (stops o). *Ex.* NOV ·
22 · 1739. (*N* reversed.)

1·45. *Æ.*

29. Variety of preceding, differing only in *Obv.*, where
: : GILES · stands in exergue.

30. *Obv.*—Two full length figures: Vernon *l.*, facing, $\frac{3}{4}$ *r.*,
sword in right, his left holding the right hand
of Brown, who faces $\frac{3}{4}$ *l.* Both wear hats.
Between them, above the royal crown, below a
ship. No line enclosing legend. *Leg.* AD ·
V (*coat*) ERN (*elbow*) ON · (2 *heads*) COM
(*elbow*) DOR (*coat*) BROWN. (*N*'s reversed.)
Ex. Scroll.

Rev.—View of the port. Six ships, 3 and 4 (latter in
indented line), all sailing *r.* Line enclosing
legend. *Leg.* HE · TOOK · PORTO ·
BELLO · WITH · SIX · SHIPS · ONLY.
(Stops :) *Ex.* NOV : 22 · 1739.

1·1. *Æ.*

31. *Obv.*—Two half length figures: Vernon *l.*, facing, $\frac{3}{4}$ *r.*
Brown *r.*, facing *l.* Both hold batons in near
side hands. Line enclosing legend. *Leg.*
ADMIRAL · VERNON · AND · COMMO-
DORE · BROWN. (Stops o)

Rev.—View of the port. Six ships, placed 1, 2, 3. 2
sailing *r.*, 4 *l.* Line enclosing legend. *Leg.*
TOOK · PORTO · BELLO · WITH · SIX ·
SHIPS · ONLY. (Stops :·) *Ex.* NOV 22
1739.

1·42. Brass.

32. *Obv.*—Two half length figures: Vernon *l.*, facing, $\frac{3}{4}$ *r.* Brown *r.*, facing *l.* Both hold batons in near side hands. No line enclosing legend. *Leg.* ADMIRAL · VERNON · AND · COMMODORE · BROWN.

Rev.—View of the port. Six ships, 3 in line, alone, sailing *l.*, 3 below *r.* No line enclosing legend. *Leg.* THE · (sic) TOOK · PORTO · BELLO · WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 · 1739.

1·5. Æ.

33. *Obv.*—Two half length figures: Vernon *r.*, facing, $\frac{3}{4}$ *l.*, Brown *l.*, facing *r.* Both hold batons in near side hands. Line enclosing legend. *Leg.* ADMIRAL VERNON AND COMMODORE BROWN.

Rev.—View of the port. Six ships, placed 1, 2, 3, all sailing *r.* Line enclosing legend. *Leg.* WHO TOOK PORTO BELLO WITH SIX SHIPS ONLY. *Ex.* NOV 22 1739.

1·5. Brass.

34. *Obv.*—Two half length figures: Vernon *r.*, facing nearly to front, Brown *l.*, facing *r.*, each holding batons in near side hands. Vernon's right hand extended. No line enclosing legend. *Leg.* · OF · ADMIRAL · VERNON · AND · COMMODORE · BROWN · *Ex.* BY · THE · COURAGE | AND · CONDUCT.

Rev.—View of the port. Six ships, placed 1, 2, 3. The 3 upper ships at extreme right. 3 sailing *r.*, 3 *l.* 3 boats in a row in harbour. No line enclosing legend. *Leg.* PORTO · BELLO · WAS · TAKEN · WITH · SIX · SHIPS · ONLY · NOV · 22 · 1739 · *Ex.* 1 · w · PECIT. Æ. Plain stops on both sides.

1·45.

PORTO BELLO, 1739, AND FORT CHAGRE, 1740.

35. *Obv.*—Half length figure, full face, baton in left, right on hip. Tree *l.*, fort with steeple, below which a ship *r.* Above fort A · VIEW | OF · FORT | CHAGRE. No line enclosing legend. *Leg.* VICE AD : RL · OF THE BLEW : & COM : ER · IN CHIEF · OF ALL HIS · MAI : SHIPS IN THE WS : IES *Ex.* (below corded line) THE HON · EDWARD | VERNON · ESQ.

Rev.—View of the port. Six ships, 2 and 4, latter curved along edge. 4 small vessels in port. No line enclosing legend. *Leg.* PORTO BELLO · TAKEN BY ADMIRAL VERNON · WITH SIX MEN OF WAR ONLY · NOV · 22 · ANNO DOM · 1739.

155. *Æ.*

36. *Obv.*—Full length figure standing on the shore, $\frac{3}{4}l.$, baton in left, right pointing at fort *l.*, above which A · VIEW | OF · FORT | CHAGRE, *r.*, a ship, sailing left. No line enclosing legend. *Leg.* THE · BRITISH · GLORY · REVIV · D · BY · ADMIRAL · VERNON.

Rev.—View of the port. Six ships, placed 1, 2, 3. 5 sailing *l.*, 1 *r.* Line enclosing legend. *Leg.* HE · TOOK · PORTO · BELLÓ · WITH · SIX · SHIPS · ONLY. *Ex.* NOV · 22 · 1739.

155. *Æ.* *Med. III.*, 143. It differs from Betts, 285, in having no scroll below date on *Reverse*.

PORTO BELLO, 1739, AND CARTHAGENA, 1741.

37. *Obv.*—Full length figure, wearing hat, *l.*, facing, $\frac{3}{4}r.$ Left hand extended, right receives sword, which DON BLASS, on left knee before Vernon, offers with his right, hat in extended left. Small ship, showing three masts, *r.* No line enclosing legend. *s* in DON reversed. *Leg.*

THE · PRIDE · OF · SPAIN · HUMBLD ·
BY · AD : VERNON. (*PRIDE irregularly cut.*)

Ex. Ornament of Lion's head between branches with leaves.

Rev.—Four ships, sailing *r.*, towards barred entrance of port before two forts, *r.* City, and church with steeple on hill, *l.* Leaf ornament below water. No line enclosing legend. *Leg.* VERNON : CONQUERD : CARTAGENA.
Ex. APRIL (*leaf*) I : 1741.

1·5. Æ.

VERNON AT CARTHAGENA, 1741.

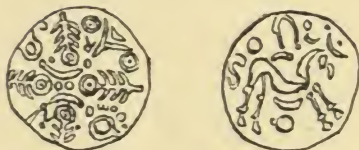
38. *Obv.*—Full length figure *l.*, standing on platform, baton in left hand, elbow bent, right hand extended. Anchor *r.*, Cannon *l.* Line enclosing legend. *Leg.* THE · BRITISH : GLORY · REVIV · D · BY · ADMIRAL : VERNON. (*N's reversed*).

Rev.—Large fort in foreground *r.* Outside it a large ship sailing *l.*, and 4 small ships sailing *r.* Two smaller ships, a boat with a man standing up in it and 3 smaller boats, all within harbour. Trees on both sides. Town in background showing large buildings with 3 steeples. Line enclosing legend. *Leg.* AD · VERNON · ADM^t OGLE TOOK · CARTHAGENA · BY · SEA · AND · LAND, *Ex.* AP^t : 1 : 174 : 1.

1·5. Æ.

LOUIS BATTENBERG,
Vice-Admiral.

MISCELLANEA.



A FALSE ANCIENT BRITISH COIN.

I RECOGNIZED this specimen as a forgery amongst several ordinary coins in lot 39 of Puttick and Simpson's Sale of January 27, 1909. In Sir John Evans' *The Coins of the Ancient Britons*, p. 247, we find, under the description of Pl. vi., No. 11, a coin struck at Verulamium, "A false coin with the same obverse and a disjointed horse on the reverse, disgraces Pl. i. of the *Mon. Hist. Brit.*, in which it stands No. 50." The full title of this work is *Monumenta Historica Britannica, or Materials for the History of Britain from the Earliest Period*, edited by Henry Petrie, F.S.A., and the Rev. John Sharpe, B.A., fol., London, 1848. The illustration in the *Mon. Hist. Brit.* is not, however, from this identical coin, but from one which was no doubt struck or cast from the same dies. My specimen, which is slightly cupped, is apparently of silver, and weighs 59.8 grs. Mr. W. J. Hocking of the Royal Mint kindly examined it, and he is rather inclined to consider it to be struck and not cast.

The obverse is very similar to that of Evans, Pl. vi., No. 11, the difference being that on my coin there are only six leaves instead of eight or ten leaves in each wreath forming the cross, and the reverse is very like the reverse of Evans, Pl. B, No. 8, but there is no exergual line. The edge is too smooth and regular for a genuine coin.

BERNARD ROTH.

ROMAN COINS FROM CORBRIDGE AND MANCHESTER.

STUDENTS of Roman numismatics will be glad to learn that an excellent description of the remarkable little hoard of *solidi*, found in 1908 at Corbridge, has appeared in the report of the excavations for that year.¹ Mr. H. H. E. Craster gives a brief account of the contents of the hoard, which comprised 48 *solidi* of the second half of the fourth century (Valentinian II, 4; Valens, 2; Gratian, 16; Valentinian II, 8; Theodosius, 5; Magnus Maximus, 13). All the reverses except one (Gratian, PRINCIPIVM IVVENTVTIS) were either VICTORIA AVGG or RESTITVTOR REIPVBLICAE. No less than 43 were of the mint of Trier; 2 of Rome, 1 of Constantinople, and 2 of uncertain mint (bearing only the mark COM). One of the Gratians is a blundered coin. The hoard must have been buried about 385 A.D., and Mr. Craster connects its deposit with the final fall of Corstopitum. In the same report will be found notes and descriptions of other coins found at Corbridge during the season of 1908.

An appendix, of no less than 153 pages, to the Second Annual Report of the Manchester and District Branch of the Classical Association of England and Wales,² deals with the Roman coins of Manchester, and is intended to "record, as completely as possible, all the Roman coins known to have been already discovered in Manchester." The only hoard of any importance is that found at Knott Mill about 1852, of the Constantinian period, for the description of which Mr. G. C. Brooke is mainly responsible.

A vast amount of industry has been spent on the descriptions, and one can only admire the patience of those who have worked out the identifications, even though the result to science seems rather small. The following points may be noted in criticism. Professor R. S. Conway, on p. 39, advances a new interpretation of the word *multis* in the votive inscriptions. "The chief vows (*e.g.* those of the chief colleges?) were made for a period of twenty years, but many others (*e.g.* those of important officials?) for a period of thirty years." It is difficult to see how the phrase VOTIS XX MVLTIS XXX

¹ *Corstopitum: Report on the Excavations in 1908.* By W. H. Knowles and R. H. Forster, with contributions by H. H. E. Craster and F. Haverfield. [From *Archaeologia Aeliana*, Third Series, vol. v.] Newcastle-upon-Tyne, 1909.

² *The Roman Fort at Manchester*, edited by F. A. Bruton. Manchester University Press, 1909.

can be made to bear such a meaning, or how, grammatically regarded, this interpretation is much of an improvement on the older solutions. On p. 83 Mr. MacInnes gives two coins said to have been found in the bed of the river Irk in 1901; one is described as a bronze coin of Pyrrhus (*obv.* head r., with long wavy locks; *rev.* ΒΑΣΙΛΕΩΣ ΠΥΡΡΟΥ, tree with branches); the other is a bronze Carthaginian coin of the third century B.C. The evidence as to the circulation of Greek coins of the pre-Roman period in this country is usually very doubtful, and, without questioning the fact that these pieces were found where they are said to have been found, one cannot help suspecting that they came to England in comparatively modern times. Apart from that, the first piece corresponds to nothing that is known in the coinage of Pyrrhus, and, if correctly described, is either an unpublished variety or a forgery. On p. 121 is given one of the commonest of Alexandrian coins, a Probus of year 1, which might have been found in any catalogue of Alexandrian coins, but was naturally enough not to be discovered in Cohen's book. Mr. Heywood's explanation of the date is quite correct, and the doubting note of the cataloguer appears to be due to a misunderstanding of a passage in Mr. Head's *Historia Numorum*. One more correction, and we have done. The bronze Romano-Campanian coin, No. 66, cannot be attributed to Larinum, and M. Babelon's remark, on which Professor Conway has founded this attribution, will hardly bear the interpretation that has been given to it.

G. F. H.

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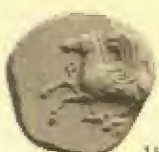
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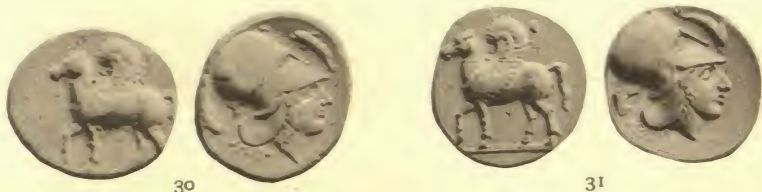


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- 1897 †PRICE, F. G. HILTON, Esq., F.S.A., F.G.S., 17, Collingham Gardens, S.W.
- 1903 PRICE, HARRY, Esq. (address not known).
- 1878 PRIDEAUX, COL. W. F., C.S.I., F.R.G.S., M.R.A.S., 1, West Cliff Terrace, Ramsgate.
- 1899 PRITCHARD, JOHN E., Esq., F.S.A., 85, Cold Harbour Road, Redland, Bristol.
- 1906 RADFORD, A. J. VOOGHT, Esq., Vacye, College Road, Malvern.
- 1902 RAMSDEN, HENRY A., Esq., Chargé d'Affaires of Cuba, P.O. Box 214, Yokohama, Japan.
- 1887 RANSOM, W., Esq., F.S.A., F.L.S., Fairfield, Hitchin, Herts.
- 1893 RAPHAEL, OSCAR C., Esq., New Oxford and Cambridge Club, 68, Pall Mall, W.
- 1890 RAPSON, PROF. E. J., M.A., M.R.A.S., 8, Mortimer Road, Cambridge.
- 1905 RASHLEIGH, EVELYN W., Esq., Stoketon, Saltash, Cornwall.
- 1909 RAYMOND, WAYTE, Esq., South Norwalk, Connecticut, U.S.A.
- 1887 READY, W. TALBOT, Esq., 66, Great Russell Street, W.C.
- 1903 REGAN, W. H., Esq., 51, Queen's Road, Bayswater, W.

ELECTED

- 1876 *ROBERTSON, J. D., Esq., M.A., 17, St. George's Court, Gloucester Road, S.W.
- 1903 ROSENHEIM, MAX, Esq., F.S.A., 68, Belsize Park Gardens, N.W.
- 1900 ROSKELL, ROBERT N., Esq., 1, Gray's Inn Square, W.C.
- 1896 *ROTH, BERNARD, Esq., J.P., King's Wood, Enfield.
- 1904 ROWLANDSON, HERVY, Esq., Nant-y-Glyn, Clapton Common, Stamford Hill, N.
- 1903 RUBEN, PAUL, Esq., Ph.D., Alte Rabenstrasse, 8, Hamburg, Germany.
- 1904 RUSTAFFJAELL, ROBERT DE, Esq., Luxor, Egypt.
-
- 1872 *SALAS, MIGUEL T., Esq., 247, Florida Street, Buenos Ayres.
- 1877 *SANDEMAN, LIEUT.-COL. JOHN GLAS, M.V.O., F.S.A., Whin-Hurst, Hayling Island, Havant, Hants.
- 1906 SAWYER, CHARLES, Esq., 9, Alfred Place West, Thurloe Square, S.W.
- 1875 SCHINDLER, GENERAL A. HOUTUM, C.I.E., Teheran, Persia.
- 1905 SEARLE, REV. W. G., M.A., 11, Scroope Terrace, Cambridge.
- 1904 SEEBOHM, FREDERICK, Esq., LL.D., Litt.D., F.S.A., The Hermitage, Hitchin.
- 1895 SELBY, HENRY JOHN, Esq., The Vale, Shortlands, Kent.
- 1907 *SELTMAN, CHARLES T., Esq., Kinghoe, Berkhamsted, Herts.
- 1890 SELTMAN, E. J., Esq., Kinghoe, Berkhamsted, Herts.
- 1900 SHACKLES, GEORGE L., Esq., Wickersley, Brough, R.S.O., E. Yorks.
- 1908 SHEPHERD, EDWARD, Esq., 2, Cornwall Road, Westbourne Park, W.
- 1896 SIMPSON, E. C., Esq., Huntriss Row, Scarborough.
- 1893 *SIMS, R. F. MANLEY-, Esq. (address not known).
- 1896 SINHA, KUMVAR KUSHAL PAL, RAIS OF KOTLA, Kotla, Agra, India.
- 1883 SMITH, R. HOBART, Esq., 141, East Avenue, Norwalk, Connecticut, U.S.A.
- 1892 SMITH, VINCENT A., Esq., Hazlewood, The Park, Cheltenham.
- 1890 SMITH, W. BERESFORD, Esq., Kenmore, Vanbrugh Park Road West, Blackheath.

ELECTED

- 1905 SNELLING, EDWARD, Esq., 26, Silver Street, E.C.
 1909 SOUTZO, M. MICHEL, 8, Strada Romana, Bucharest.
 1894 SPINK, SAMUEL M., Esq., 17, Piccadilly, W.
 1902 STAINER, CHARLES LEWIS, Esq., 10, South Parks Road, Oxford.
 1890 STANFORD, CHARLES THOMAS-, Esq. (address not known).
 1869 *STREATFEILD, REV. GEORGE SIDNEY, Fenny Compton Rectory, Leamington.
 1896 STRIDE, ARTHUR LEWIS, Esq., J.P., Bush Hall, Hatfield.
 1864 *STUBBS, MAJOR-GEN. F. W., R.A., M.R.A.S., 2, Clarence Terrace, St. Luke's, Cork, Ireland.
 1909 SYMONDS, H., Esq., Union Club, Trafalgar Square, S.W.
- 1896 *TAFFS, H. W., Esq., 35, Greenholm Road, Eltham, S.E.
 1879 TALBOT, LIEUT.-COL. THE HON. MILO GEORGE, R.E., 2, Paper Buildings, Temple, E.C.
 1897 TALBOT, W. S., Esq., I.C.S., c/o Messrs. King & Co., 9, Pall Mall, S.W.
 1888 TATTON, THOS. E., Esq., Wythenshawe, Northenden, Cheshire.
 1892 *TAYLOR. R. WRIGHT, Esq., M.A., LL.B., F.S.A., 8, Stone Buildings, Lincoln's Inn, W.C.
 1887 TAYLOR, W. H., Esq., The Croft, Wheelwright Road, Erdington, near Birmingham.
 1887 THAIRLWALL, F. J., Esq., 12, Upper Park Road, Haverstock Hill, N.W.
 1896 THOMPSON, SIR HERBERT, BART., 9, Kensington Park Gardens, W.
 1896 THORBURN, HENRY W., Esq., Cradock Villa, Bishop Auckland.
 1903 THORPE, GODFREY F., Esq., Falklands, 62, Nightingale Lane, Balham, S.W.
 1888 THURSTON, E., Esq., Central Government Museum, Madras.
 1894 TRIGGS, A. B., Esq., Bank of New South Wales, Yass, New South Wales.
 1887 TROTTER, LIEUT.-COL. SIR HENRY, K.C.B., 54, Park Street, Grosvenor Square, W.
- 1874 VERITY, JAMES, Esq., High Bank, The Drive, Roundhay, Leeds.
 1903 VINTER, WALTER FREDERICK, Esq., Linsdisfarne, Walton-on-Thames, Surrey.

ELECTED

- 1874 VIZE, GEORGE HENRY, Esq., 15, Spencer Road, Putney, S.W.
- 1899 VLASTO, MICHEL P., Esq., 12, Allée des Capucines, Marseilles, France.
- 1892 VOST, LIEUT.-COL. W., I.M.S., Muttra, United Provinces, India.
- 1905 WACE, A. J. B., Esq., Leslie Lodge, Hall Place, St. Albans.
- 1902 †WAKLEY, THOMAS, Esq., L.R.C.P., 16, Hyde Park Gate, S.W.
- 1888 WALKER, R. K., Esq., M.A., Trin. Coll. Dub., Watergate, Meath Road, Bray, Ireland.
- 1897 WALTERS, FRED. A., Esq., F.S.A., 37, Old Queen Street, Westminster, S.W., *Hon. Secretary.*
- 1894 WARD, JOHN, Esq., J.P., F.S.A., Farningham, Kent.
- 1901 *WATTERS, CHARLES A., Esq., Highfield, Woolton Road, Wavertree, Liverpool.
- 1901 WEBB, PERCY H., Esq., 4 & 5, West Smithfield, E.C., *Hon. Treasurer.*
- 1885 *WEBER, F. PARKES, Esq., M.D., F.S.A., 19, Harley Street, W.
- 1883 *WEBER, SIE HERMANN, M.D., 10, Grosvenor Street, Grosvenor Square, W.
- 1884 WEBSTER, W. J., Esq., Melrose, Beulah Road East, Thornton Heath.
- 1904 WEIGHT, WILLIAM CHARLES, Esq., 6, Ship Street, Brighton.
- 1905 WEIGHTMAN, FLEET-SURGEON A. E., Junior United Service Club, Charles Street, St. James's, S.W.
- 1899 WELCH, FRANCIS BERTRAM, Esq., B.A., Hafod, Wynne, Oswestry, Shropshire.
- 1869 *WIGHAM, MRS. LEWIS, Redcourt, Haslemere.
- 1908 WILLIAMS, T. HENRY, Esq., 85, Clarendon Road, Putney, S.W.
- 1881 WILLIAMSON, GEO. C., Esq., F.R.S.L., Burgh House, Well Walk, Hainpstead, N.W.
- 1906 WILLIAMSON, CAPT. W. H., Blenheim Club, St. James's Square, S.W.
- 1869 WINNER, THOMAS B., Esq., 81, Shooter's Hill Road, Blackheath, S.E.
- 1904 WINTER, CHARLES, Esq., Ormskirk, Durham Road, W. Wimbledon.
- 1906 WOOD, HOWLAND, Esq., 98, Percy Street, Brookline, Massachusetts, U.S.A.
- 1860 WORMS, BARON G. DE, F.R.G.S., F.S.A., V.P.R.S.L., F.G.S., D.L., J.P., 17, Park Crescent, Portland Place, W.

ELECTED

- 1903 WRIGHT, H. NELSON, Esq., Allahabad, United Provinces, India.
- 1890 WROTH, W. W., Esq., Assistant-Keeper of Coins, British Museum.
- 1904 YEAMES, ARTHUR HENRY SAVAGE, Esq., 7, Long Wall Street, Oxford.
- 1889 YEATES, F. WILLSON, Esq., 7, Leinster Gardens. Hyde Park, W.
- 1880 YOUNG, ARTHUR W., Esq., 12, Hyde Park Terrace, W.
- 1898 YOUNG, JAMES, Esq., 14, Holland Road, W.
- 1900 ZIMMERMANN, REV. JEREMIAH, M.A., D.D., LL.D., 107, South Avenue, Syracuse, New York, U.S.A.

HONORARY FELLOWS

ELECTED

- 1898 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY, Palazzo Quirinale, Rome.
- 1891 BABELON, M. ERNEST, Mem. de l'Inst., Bibliothèque Nationale, Paris.
- 1903 BAHRFELDT, GENERAL-MAJOR M., Rastenburg, East Prussia.
- 1898 BLANCHET, M. J. A., 40, Avenue Bosquet, Paris.
- 1898 DRESSER, DR. H., Münz-Kabinet, Kaiser Friedrich Museum, Berlin.
- 1899 GABRICI, PROF. DR. ETTORE, Salita Stella, 21, Naples.
- 1893 GNECCHI, COMM. FRANCESCO, 10, Via Filodrammatici, Milan.
- 1886 HERBST, HERR C. F., late Director of the Museum of Northern Antiquities and Inspector of the Coin Cabinet, Copenhagen.
- 1886 HILDEBRAND, DR. HANS, Riksbibliotek, Stockholm.
- 1873 IMHOOF-BLUMER, DR. F., Winterthur, Switzerland.
- 1893 JONGHE, M. le VICOMTE B. DE, Rue du Trône, 60, Brussels.
- 1878 KENNER, DR. F., K.K. Museen, Vienna.
- 1904 KUBITSCHKE, PROF. J. W., Pichlergasse, 1, Vienna.
- 1893 LOEBBECKE, HERR A., Cellerstrasse, 1, Brunswick.
- 1904 MAURICE, M. JULES, 33, Rue Washington, Paris.
- 1898 MILANI, PROF. LUIGI ADRIANO, Florence.
- 1908 MOWAT, COMMANDANT ROBERT KNIGHT, 10, Rue des Feuillantines, Paris.
- 1899 PICK, DR. BEHRENDT, Münzkabinet, Gotha.
- 1895 REINACH, M. THÉODORE, 9, Rue Hammelin, Paris.

ELECTED

- 1891 SVORONOS, M. J. N., Conservateur du Cabinet des Médailles, Athens.
 1886 WEIL, DR. RUDOLF, Schöneberger Ufer, 38, III., Berlin, W.

MEDALLISTS

OF THE ROYAL NUMISMATIC SOCIETY

- 1883 CHARLES ROACH SMITH, Esq., F.S.A.
 1884 AQUILLA SMITH, Esq., M.D., M.R.I.A.
 1885 EDWARD THOMAS, Esq., F.R.S.
 1886 MAJOR-GENERAL ALEXANDER CUNNINGHAM, C.S.I., C.I.E.
 1887 JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., P.S.A.
 1888 DR. F. IMHOOF-BLUMER, Winterthur.
 1889 PROFESSOR PERCY GARDNER, Litt.D., F.S.A.
 1890 MONSIEUR J. P. SIX, Amsterdam.
 1891 DR. C. LUDWIG MÜLLER, Copenhagen.
 1892 PROFESSOR R. STUART POOLE, LL.D.
 1893 MONSIEUR W. H. WADDINGTON, Sénateur, Membre de l'Institut, Paris.
 1894 CHARLES FRANCIS KEARY, Esq., M.A., F.S.A.
 1895 PROFESSOR DR. THEODOR MOMMSEN, Berlin.
 1896 FREDERIC W. MADDEN, Esq., M.R.A.S.
 1897 DR. ALFRED VON SALLET, Berlin.
 1898 THE REV. CANON W. GREENWELL, M.A., F.R.S., F.S.A.
 1899 MONSIEUR ERNEST BABELON, Membre de l'Institut, Conservateur des Médailles, Paris.
 1900 PROFESSOR STANLEY LANE-POOLE, M.A., Litt.D.
 1901 S. E. BARON WLADIMIR VON TIESENHAUSEN, St. Petersburg.
 1902 ARTHUR J. EVANS, Esq., M.A., F.R.S., F.S.A., Keeper of the Ashmolean Museum, Oxford.
 1903 MONSIEUR GUSTAVE SCHLUMBERGER, Membre de l'Institut, Paris.
 1904 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY.
 1905 SIR HERMANN WEBER, M.D.
 1906 COMM. FRANCESCO GNECCHI, Milan.
 1907 BARCLAY VINCENT HEAD, Esq., D. Litt., D.C.L., Ph.D., Corr. de l'Inst.
 1908 PROFESSOR DR. HEINRICH DRESSEL, Berlin.
 1909 H. A. GRUEBER, Esq., F.S.A.

PROCEEDINGS
OF THE
ROYAL NUMISMATIC SOCIETY.

PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY.

SESSION 1908—1909.

OCTOBER 15, 1908.

SIR HENRY H. HOWORTH, K.C.I.E., F.R.S., F.S.A., President,
in the Chair.

A letter was read from Lady Evans in acknowledgment of the resolution of condolence which had been passed at the Annual General Meeting, on the death of the late President, Sir John Evans, K.C.B.

The following Presents were announced and laid upon the table :—

1. Publications de la Section historique de l'Institut Grand-Ducal de Luxembourg. Vol. iv.

2. Dual Origin of the Town of Cambridge. By Arthur Gray. From the Cambridge Antiquarian Society.

3. Medallie Illustrations of the History of Great Britain and Ireland. Plates lxxi.—lxxx. From the Trustees of the British Museum.

4. The Imperial Gazetteer of India. From the Delegates of the Clarendon Press.

5. Catalogue of Coins in the Indian Museum, Calcutta. Vols. ii. and iii., Muhammadan Series. From the Trustees of the Calcutta Museum.

6. Numismatische Zeitschrift. *Neue Folge*. Bd. i., 1908.

7. Monatsblatt der numismatischen Gesellschaft in Wien. Nos. 299-302.

8. Les Médailles romaines de Christine de Suède. By the Baron de Bildt. From the Author.

9. I Venti Medaglioni d'Abukir. By G. Dattari. From the Author.

10. Contributi al "Corpus delle Falsificazioni." By L. Lafranchi. From the Author.

11. I diversi Stili nella Monetazione romana. By L. Lafranchi. From the Author.

12. Contributi al "Corpus delle Monete Imperiale" (Pts. i.-iv.). By P. Monti. From Sig. G. Lafranchi.

13. The Gold Coinage of Asia before Alexander the Great. By P. Gardner. From the Author.

14. Revue Belge de Numismatique. 3^{me} et 4^{me} livr., 1908.

15. American Journal of Archaeology. Vol. xii., Nos. 2 and 3.

16. Proceedings of the Cambridge Antiquarian Society. Nos. xlviii.-l.

17. Catalogue of the Exhibition of Portraits. From the Cambridge Antiquarian Society.

18. Revue Numismatique. 2^{me} trim., 1908.

19. Journal of the Royal Society of Antiquaries of Ireland. Vol. xxxviii., Pt. 2.

20. American Journal of Numismatics. Vol. xlii., No. 3.

21. Annual Report of the Deputy-Master of the Mint, 1907.

22. Bulletin de Correspondance hellénique. Vol. xxvi., Pts. 8-10.

23. Revue Suisse de Numismatique. Tom. xiv., 1^{re} livr.

24. Zeitschrift für Numismatik. Bd. xxvi., Heft 4.

25. Notices extraites de la Chronique de la Revue Numismatique. 2^{me} trim., 1908. By A. Blanchet. From the Author.

26. *Proceedings of the Royal Irish Academy.* Vol. xxvii., Sec. C, Nos. 5-8, and Appendix.

27. *Coinage of Nepal.* By E. H. Walsh. From the Royal Asiatic Society.

28. *Report of the Madras Government Museum, 1907-1908.*

29. *Bulletin de l'Académie royale de Belgique, 1908.* Nos. 3-5.

30. *Annual Report of the British School at Athens.* No. xiii.

31. *Coins and how to know them.* By Gertrude B. Rawlings. From Messrs. Methuen & Co.

32. *Rivista Italiana di Numismatica, Fasc. iii., 1908.*

Mr. A. H. Baldwin exhibited a gold stater of Gortyna, in Crete, of the third century B.C., having on the obverse the head of Zeus laureate, and on the reverse a bull standing and the legend ΓΟΡΤΥΝΙΩΝ. This coin is of great rarity, only two other specimens being known. Mr. Baldwin exhibited also a series of silver coins of Juba II of Mauretania, bearing portraits of himself and his queen Cleopatra Selene, daughter of Mark Antony and Cleopatra of Egypt.

Mr. Horace W. Monckton showed a specimen of a medal in bronze, bearing the portraits of Darwin and Dr. A. Russel Wallace, recently issued by the Linnean Society to celebrate the fiftieth anniversary of the reading of a paper by Darwin and Dr. Wallace on the tendency of species to form varieties. The medal was designed by Mr. F. Bowcher, and executed by Mr. John Pinches.

Mr. F. Mavrogordato read a Paper entitled "Was there a Pre-Macedonian Mint in Egypt?" The paper was based on two small coins (obols) of Athenian type, with on the reverse an owl, but having in addition two hieroglyphic signs, one of which has been interpreted as representing the word "increase," the other as the throne-name of the Egyptian king

Hakor (Achôris). As Athenian coins had a wide circulation in Egypt from early times, Mr. Mavrogordato was disposed to see in these two interesting pieces an attempt to supplement this Greek money with a local issue of the same type. This Paper is printed in Vol. VIII. pp. 197 f.

Mr. Robert Ll. Kenyon communicated a paper on a recent find of silver coins at Bridgnorth, in Shropshire. The hoard consisted of 144 pieces in all; but as they were in poor condition, 55 could not be identified. The coins were chiefly of Elizabeth, James I, and Charles I; Mary and Philip being represented by two pieces only. The coins of Charles I were all of the Tower mint, with the exception of a half-crown of Worcester, which, though somewhat clipped, was nevertheless in fine condition. Mr. Kenyon was of opinion that the hoard was concealed during March, 1646, when Bridgnorth was besieged by the Parliamentary forces. This Paper is printed in Vol. VIII. pp. 319 f.

NOVEMBER 19, 1908.

SIR HENRY H. HOWORTH, K.C.I.E., President, in the Chair.

Edward Shepherd, Esq., was elected a Fellow of the Society.

The following Presents were announced and laid upon the table:—

1. Numismatique Constantinienne. By Jules Maurice. From the Author.
2. Journal of the Royal Society of Antiquaries of Ireland. Vol. xxxviii., Pt. 3.
3. Archaeologia Aeliana. Ser. iii., Vol. iv.
4. Medals, Jetons, and Tokens illustrative of the Science of Medicine. Art. 76. By Dr. G. H. Storer. From the Author.

5. Notices extraites de la Chronique de la Revue Numismatique. 3^me trim., 1908. By A. Blanchet. From the Author.

6. Monatsblatt der numismatischen Gesellschaft in Wien. No. 303.

7. Patterns and Medals bearing the legend "Jacobus IV" or "Jacobus VIII." By Helen Farquhar. From the Author.

8. Numismatique de l'Evêché de Genève aux xi^me et xii^me Siècle. By E. Demole. From the Author.

9. Medallie Illustrations of the History of Great Britain and Ireland. Plates lxxxi.-xc. From the Trustees of the British Museum.

10. Académie royale de Belgique. Bulletin de la Classe des Lettres. Nos. 6-8, 1908.

Mr. T. Bliss exhibited a series of silver pennies of Wulfred, Ceolnoth, and Plegmund, Archbishops of Canterbury.

Mr. H. W. Monekton showed a specimen of the Prestwich Medal of the Geological Society, having on the obverse a bust of Joseph Prestwich, and on the reverse a figure of the fossil *Prestwichia*. The medal was designed by the late Sir John Evans, and executed by Mr. F. Bowcher.

Mr. Bernard Roth read a Paper on a British gold stater of the Brigantes, which had been recently found, with many others of the same class, at South Ferriby, in Lincolnshire. It has the usual reverse type of a rudely formed horse; but on the obverse, instead of a head, a large flower-like trefoil, bearing some resemblance to the numismatic Tudor rose. It is an entirely new type, and this specimen is so far unique. This Paper is printed on pp. 7 f. of the present volume.

Miss Helen Farquhar read a Paper on Nicholas Hilliard, "Embossed of Medals in Gold." After giving some particulars of Hilliard as a miniature-painter, Miss Farquhar proceeded to show that he was also skilful as a goldsmith and worker in metals. Specimens of his handicraft are to be met with

in the form of frames containing some of his most noted miniatures, and also in the famous Armada Jewel in the possession of Mr. J. Pierpont Morgan. From analogy of workmanship, Miss Farquhar attributed to Hilliard the fine Armada Medal on which Elizabeth is represented full-face, wearing a high ruff and an elaborate dress. The execution of this bust in its general design is so similar to the full-length figure of the Queen on her second Great Seal, which was executed by Hilliard, that there seemed no doubt that he was employed also to make the Queen's medals. Other medals of the same period were also attributed to Hilliard, and amongst them one of James I, which was struck in 1604 to commemorate the peace with Spain, and which represents the king three-quarter face, wearing a slashed doublet and a hat ornamented with a crown and a jewel. This Paper is printed in Vol. VIII, pp. 324 f.

DECEMBER 17, 1908.

SIR HENRY H. HOWORTH, K.C.I.E., President, in the Chair.

The following Presents were announced and laid upon the table:—

1. Bulletin de Correspondance hellénique. Pts. xi.-xii., 1907; and i.-xii., 1908.
2. Transactions of the Japan Society. Vol. viii.
3. Proceedings of the Cambridge Antiquarian Society. No. li.
4. Outside the Trumpington Gates. By the Rev. H. P. Stokes. From the Cambridge Antiquarian Society.
5. Monatsblatt der numismatischen Gesellschaft in Wien. No. 304.
6. Journal of Hellenic Studies. Vol. xxvii., Pt. 2.

7. Errata-corrige. By E. Dressel. From the Author.
8. Revue Suisse de Numismatique. Vol. xiv., Pt. 1.
9. Foreningen til Norske Fortidmindesmerkers Bevaring. Aarsberetning for 1907.
10. Zeitschrift für Numismatik. Bd. xvii., Heft 1-2.
11. The Canadian Antiquarian. Vol. v., No. 3.
12. Mémoires de la Société Royale des Antiquaires du Nord. 1907.

Mr. F. A. Walters exhibited a groat, half-groat, and penny, all unpublished, of the rosette-mascle issue of Henry VI, struck at Calais. The groat and half-groat differed from the usual type of this coinage in the placing of a small mascle in the spandril of the tressure on each side of the king's head.

The President showed a badge of the Pitt Club.

Dr. Head read a Paper on some Ephesian tesserae, having on the obverse a stag, and on the reverse a bee surrounded by the legend *κήρυξ δόει πρὸς πάλιν*. Eckhel had considered these pieces to be druggists' tickets for the purpose of advertising the sale of a medicament compounded of bees-wax for the cure of a disease called *πάλιν*. Dr. Head, however, put forward the suggestion that they might be *Ἐφέσια γράμματα* used by bee-keepers as charms for the calling back of bees to the hive at swarming-time by the rattling of them in a resounding pot or kettle. This Paper is printed in Vol. VIII. pp. 281 f.

Mr. J. G. Milne communicated a Paper on "The Lenden Token-Coinage of Egypt under the Romans," recently found at Behnesa, the ancient Oxyrhynchus, in Egypt. Mr. Milne divided these tokens into two chief classes: one with bust of Athene on the obverse, and Victory on the reverse; the other with a figure of the god Nilus and with various reverses, showing figures of Athene, Sarapis, Horus, Abundantia, Pietas, &c. A summary was given of all the billon and bronze coins found during the excavations at Behnesa, which

had extended over a period of five seasons. From this summary it appears that from the time of Augustus to Severus Alexander, the predominating currency in the district was bronze money, which from that date to the reign of Diocletian was entirely superseded by billon money. As a large number of the leaden pieces bear not only the initials of Oxyrhynchus, but also dates such as are met with on the coins of Alexandria of Roman times, it was suggested that they served as token-money from the middle to the end of the third century A.D. Mr. Milne would separate these tokens from the ordinary leaden tickets which were in common use in Egypt from the reign of Augustus onwards, and which served as checks for admission to games, for commercial purposes, advertisements, &c. This Paper is printed in Vol. VIII. pp. 287 f.

JANUARY 21, 1909.

SIR HENRY H. HOWORTH, K.C.I.E., President, in the Chair.

The following Presents were announced and laid upon the table:—

1. *Revue Belge de Numismatique*. 1^{ère} livr., 1909.
2. *Rivista Italiana di Numismatica*. Fasc. iv., 1908.
3. *Monatsblatt der numismatischen Gesellschaft in Wien*. Nos. 305, 306.
4. *Numismatic Circular*, 1908. From Messrs. Spink & Son.
5. *Les Médailles frappées en l'honneur du Bailli de Suffren*. By Baron Guillebert. From the Author.
6. *American Journal of Archaeology*. Vol. xii., Pt. 4, and the Annual Reports for 1907-1908.
7. *A Hoard of English Coins found in Switzerland*. By Bernard Roth. From the Author.

8. A Hoard of Staters and "Gold Bullets" recently found in France. By Bernard Roth. From the Author.

9. Portraiture of our Monarchs on their Coins and Medals. By Helen Farquhar. From the Author.

Mr. Thomas Bliss exhibited a series of pennies of the Mercian kings Offa, Coenwulf, Ceolwulf I, and Berhtulf.

Dr. Arthur Evans showed a series of medals and coins by Abraham and Thomas Simon, which included medals of Lord Inchiquin and Elizabeth Cleypole, the crown and half-crown of Cromwell, and the "Reddite" crown of Charles II; and Miss Helen Farquhar clichés in silver-foil of the broad and half-crown of Charles II, which were also the work of Thomas Simon.

These exhibitions were in connexion with the Paper which was read by Mr. W. J. Hocking on "Simon's Dies in the Royal Mint Museum, with some Notes on the Early History of Coinage by Machinery." The first portion of the Paper dealt with the mechanical methods employed in Italy in the earlier half of the sixteenth century; the establishment in Paris, in 1551, of a full set of coining apparatus; and the coinage of mill money in England during 1561-72. In connexion with the coinage of Italy Mr. Hocking mentioned Bramante, whose name is the first associated with the screw press; Leonardo da Vinci, who placed on record notes and sketches relating to the method of cutting disks for medals and coins; and Benvenuto Cellini, who worked for Popes Clement VII and Paul III and for Cosmo de' Medici, and who used both the hammer and the screw for the production of his fine works. Machinery for striking money was first set up in France in the second half of the sixteenth century, under the direction of Béchot, the Graveur-Général, the machine and tools used being those invented by an Augsburg jeweller named Max Schwab. Aubin Olivier was the first to suggest the placing of lettering on the rim of the coin as a preventive against clipping. The

introduction of machinery for striking money in England is to be attributed to a Frenchman named Eloye Mastrell, who, under the patronage of the Queen and her Council, installed his new process at the Tower Mint in 1561. It was not, however, encouraged by the principal officers of the Mint, and in consequence it was used only for pieces of small size. Mastrell having been condemned to death for certain malpractices in connexion with the making of dies, the process was for a time suspended. Mr. Hocking defined the true meaning of the term "mill money," which is now generally applied to the graining of the rims of the coins. This was not its original meaning, as it was applied to all money struck by the screw, from the circumstance that the necessary power for driving the machinery was, in the first instance, supplied by a mill. The place in Paris where the process was first installed was called the *Hôtel des Monnaies du Moulin*. The second portion of this Paper was read on February 18.

FEBRUARY 18, 1909.

SIR HENRY H. HOWORTH, K.C.I.E., President, in the Chair.

Henry Symonds, Esq., was elected a Fellow of the Society.

The following Presents were announced and laid upon the table :—

1. Catalogue of Indian Coins, Andhras, Kshatrapas, &c. By Professor E. J. Rapson. From the Trustees of the British Museum.

2. Proceedings of the Society of Antiquaries of London. Vol. xlii., 1908.

3. Notices extraites de la Chronique de la Revue Numismatique. By A. Blanchet. From the Author.

4. Zeitschrift für Münz- und Medaillenkunde. Bd. ii., Heft 1, 1908.

5. Numismatiska Medellanden. Vol. xvii., Pts. 1-4.
6. Journal of the Royal Society of Antiquaries of Ireland. Vol. xxxviii., Pt. 4, 1908.
7. Revue Numismatique. Vol. xii., 4^{me} trim., 1908.
8. Fornvännen-Meddelanden från K. Vitterhets-Historie og Antikvitets Akademien, 1907.
9. Rare and Unpublished Greek Coins. By M. B. Yakountchikoff. From the Author.
10. Mittheilungen der Oesterreichischen Gesellschaft für Münz- und Medaillenkunde. Bd. 4, No. 6, 1908.
11. Journal des Savants. Année 7, No. 1.

Mr. T. Bliss exhibited a series of silver coins of the Commonwealth of the rare date 1649, and patterns of the half-crown by Ramage of 1651, with and without the edge lettered.

Miss Helen Farquhar showed a cliché in silver for the reverse of a touch-piece of Charles II showing a ship in full sail. This piece is unique, and was formerly included in the Brice, Montagu, and Murdoch cabinets.

Mr. Bernard Roth exhibited a false British stater which purported to have been struck at Verulamium; also clippings of silver coins of Edward VI to Charles II, found in Southwark and at Marsham, near Abingdon.

Mr. F. A. Walters exhibited a sestertius in bronze of the Emperor Galba of the "Adlocutio" type.

Mr. Frederick A. Harrison showed a silver coin struck in China, and bearing the emperor's effigy, for currency in Tibet: this is the first silver coin with the portrait of an Emperor of China.

Mr. W. J. Hocking read the second and concluding portion of his Paper on "Simon's Dies in the Royal Mint Museum, with some Notes on the Early History of Coinage by Machinery." Taking up his subject from the middle of the seventeenth century, he mentioned the circumstances in

which mill money was re-established in France, chiefly through the exertions of the engraver Varin. Mr. Hocking then related the history of its re-introduction at the English Mint. This was effected under the superintendence of a Frenchman, Peter Blondeau, who was in 1649 invited to England for that purpose by the Government. The process of cutting the blanks and the mode of lettering or engraving the rims of the coins, as carried out by Blondeau, were described and illustrated. Particulars were also given of the various dies executed by Thomas Simon for the coinage of the Protector Cromwell, which were to be used by Blondeau; and an account was supplied of the history of these dies, which from time to time had been obtained by the authorities of the Mint. The total number of the Cromwellian matrices, punches, and dies now in the Royal Mint is twenty-six, besides such as were undoubtedly manufactured in the Mint at a later date. These subsequent fabrications were made by the engraver John Sigismund Tanner, at the instigation of the Hon. Richard Arundell (who was appointed Master of the Mint in 1738), in order that some pieces might be struck for presentation to his friends. The differences between the originals and the copies were minutely described. This Paper is printed on pp. 56 f. of the present volume.

MARCH 18, 1909.

SIR HENRY H. HOWORTH, K.C.I.E., President, in the Chair.

The President announced the decease of Mr. F. G. Hilton Price, a Fellow of the Society. A resolution of regret and of condolence to his widow and family was proposed and carried.

H.S.H. Vice-Admiral Prince Louis of Battenberg, G.C.B., G.C.V.O., G.C.M.G., and Wayte Raymond, Esq., were elected Fellows of the Society.

The following Presents were announced and laid upon the table:—

1. *Bonner Jahrbücher.* Pt. 117.
2. *Monatsblatt der numismatischen Gesellschaft in Wien.* Nos. 307, 308.
3. *Mémoires et Notes de Numismatique.* By A. Blanchet. From the Author.
4. *Proceedings of the Royal Irish Academy.* Vol. xxvii., Sect. C, Nos. 9–12.
5. *Annual Report of the Smithsonian Institute, 1907.*
6. *La Medaglia della Societa Albrizziana di Venezia.* By A. Maestri. From the Author.
7. *American Journal of Numismatics.* Vol. xliii., No. 1.

Mr. Bernard Roth exhibited two ancient British staters of Addedomaros and a forgery of the same series with the legend CVNO for “Cunobelinus.”

Mr. H. W. Monckton showed a small silver coin of Louis XV of France, dated 1716, overstruck on a similar coin of Louis XIV, but of 1715, both dates being clear on the coin.

Mr. L. A. Lawrence exhibited a noble of the fourth issue (1351–1360) of Edward III with Roman M's and open C's and E's, and with the legend on the reverse beginning IHE for IHES.

Mr. F. A. Walters read the first portion of a Paper on the Coinage of Edward IV. After a short sketch of the history of the king's reign so far as it is reflected on the coinage, a description was supplied of the heavy pieces, which must be placed first in the series. These consisted of the noble in gold and of the groat to the farthing in silver. In many respects these coins resembled in their types and special marks those of the last issue of the previous reign. Of the gold only two examples are known, these being in the collection of the late Sir John Evans. This coinage was followed by an issue which bore for mint-mark a rose, and which

extended down to 1465, when radical changes were made, not only in some of the types, but also in the weights of the individual denominations. Some of the early coins bear special privy marks, such as the annulet and the crescent, both of which appear to have some historical significance. In connexion with the paper, Mr. Bernard Roth exhibited a heavy half-groat and penny of London, and Mr. Walters a series of similar coins of York as well as of London. The remaining portion of the paper dealt with the light coinage of Edward IV, and was read on April 15.

APRIL 15, 1909.

HORACE W. MONCKTON, Esq., Vice-President, in the Chair.

The following Presents were announced and laid upon the table:—

1. Académie royale de Belgique. *Annuaire* 1909; *Bulletin*, No. 12, 1908; and No. 1, 1909.
2. The Canadian Antiquarian and Numismatic Journal. Vol. v., No. 4.
3. Proceedings of the Society of Antiquaries of London. Vol. xxii., No. 1; and General Index, 2nd Ser., Vols. 1-20.
4. *Revue Belge de Numismatique*. 2^{me} livr., 1909.
5. *Rivista Italiana di Numismatica*. Fasc. i., 1909.
6. *Ein Fund Achaischer Bundes-Münzen*. By A. Löbbecke. From the Author.
7. *Appunti di Numismatica Romana*. Il Ripostiglio d'Aosta, &c. By Francesco Gnechchi. From the Author.

Mr. W. Marsh exhibited a heavy groat of Edward IV with the mint-mark a rose and with a quatrefoil on each side of the king's neck on the obverse.

Lieut.-Col. H. W. Morrieson showed a series of light groats of the same reign with the mint-marks rose and crown, sun and crown, cross fitchée and rose, and annulet.

Mr. F. A. Walters read the second and concluding portion of his Paper on the coinage of Edward IV (1461-1470). The writer dealt with the light coinage of this reign, which, though ordered in 1464, does not appear to have been completely carried out till the following year. A new gold coinage was introduced, consisting of the rose noble or ryal, and its divisions the half and quarter rose noble. These coins differed somewhat in type from the previous nobles, and the current value of the ryal was placed at 10s., whilst the value of the old noble was raised to 8s. 4d. An entirely new coin called the angel noble, of the value of 6s. 8d., was also ordered; but its issue appears to have been deferred for a few years, *i.e.* till 1470. In order to facilitate the striking of these new gold coins, their issue was extended to several of the local mints—Bristol, Coventry, York, and Norwich. The silver coinage was also reduced in weight, the penny of 12 grains being substituted for that of 15 grains. In the earlier issues the rose mint-mark was continued, but this soon gave way to the sun and crown, and later to the cross fitchée, which was adopted shortly before the restoration of Henry VI (1470-1471). Mr. Walters described the more important pieces of the London and provincial mints, distinguishing in the case of Canterbury, Durham, and York between such as were struck under the authority of the king and those of the bishop or archbishop. In subsequent papers the writer proposes to deal with the coinages of Henry VI issued during 1470-1471, and those of Edward IV which followed his restoration. In connexion with his paper, Mr. Walters exhibited a unique half-groat of Norwich, and pennies of Canterbury, Bristol, and York, of specially rare types. This Paper is printed on pp. 132 f. of the present volume.

MAY 20, 1909.

SIR HENRY H. HOWORTH, K.C.I.E., President, in the Chair.

Hugh Drummond McEwen, Esq., was nominated to represent the Fellows of the Society at the next audit of the accounts of the Society.

The following Presents were announced and laid upon the table:—

1. Priced Catalogues of Sales of Coins by Messrs. Sotheby, Wilkinson, & Hodge, during the season of 1907-8. 4 Vols. Presented by Messrs. Sotheby, Wilkinson, & Hodge.

2. Monatsblatt der numismatischen Gesellschaft in Wien. Nos. 309, 310.

3. *Revue Numismatique*. 1^{re} trim., 1909.

4. *Leather Currency*. By W. Charlton. From the Author.

5. *The King's Hostel*, Trinity College, Cambridge. By W. D. Caröe. From the Cambridge Antiquarian Society.

6. *Seventh Annual Report of the Horniman Museum*. From the London County Council.

7. *Journal of the Royal Society of Antiquaries of Ireland*. Vol. xxxix., Pt. 1.

8. *Journal of Hellenic Studies*. Vol. xxix., Pt. 1.

9. *Contributi al "Corpus delle Falsificazioni."*

Bibliografia numismatica Romana.

Il prezzo di una Monete Antica falsificata.

By L. Laffranchi. From the Author.

10. *Revue Suisse de Numismatique*. Tom xv. 1^{re} livr.

11. *Aarsberetning för 1908*. From the Foreningen til Norske Fortidsmindesterkers Bevaring.

12. *Académie royale de Belgique*. Bulletin, Nos. 2 and 3, 1909.

13. *The Canadian Antiquarian and Numismatic Journal*. Vol. vi., No. 1.

14. *Proceedings of the Royal Irish Academy*. Vol. xxvii., No. 13.

15. Journal International d'Archéologie Numismatique, 1902-1907. From I. N. Svoronos.

16. Die Münze in der Kulturgeschichte. By F. Friedensburg. From the Publishers.

Mr. Leopold Messenger exhibited a "second brass" coin of Vespasian of the "Judaea Capta" type: having on the obverse the head of the Emperor with the legend IMP. CAESAR VESPASIAN. CONS. VIII. The peculiar fabric of the coin and the legend CONS. VIII for COS. VIII rendered it probable that it was a *cinque-cento* adaptation made in Italy.

Mr. H. Alexander Parsons described a penny of Henry I of the beaded cross and quatrefoil type, with the legend BRVN. ON. DERBIDEI, which may be attributed to Derby. Hitherto no coins of Henry I have been associated with that mint.

The Rev. A. W. Hands read a Paper on "A Phœnician Drachm with the Name Iahve." This unique coin, which is in the British Museum, and which has been frequently described and discussed by numismatists and Oriental scholars, has for the obverse type a bearded helmeted head, and for the reverse a bearded divinity holding an eagle and seated in a car with a winged wheel; on the right is a human head, and above, three Phœnician forms of the Hebrew letters *Yod, He, Vaw*, which have been read as "Iahve," i.e. Jehovah. The coin weighs 50.7 grs. Its chief interest is that we have the figure of the pagan Zeus associated with the name of the "Jehovah" of the Semites. The coin has been attributed to Sidon or Gaza, in which places there existed a strong Semite influence. The combination of the name of Jehovah and the figure of Zeus appears to have been an attempt on the part of the die-engraver to assign to the chief of the Greek gods the name of the God of the Semites. The winged chariot is not infrequently met with in Greek art, and Mr. Hands supplied an illustration from a Greek vase representing a car of precisely

the same form as that on the coin, but bearing the god Triptolemus. The helmeted head on the obverse showed how entirely Greek and heathen the type of the coin was intended to be. This paper is printed on pp. 121 f. of the present volume.

JUNE 17, 1909.

ANNUAL GENERAL MEETING.

SIR HENRY H. HOWORTH, K.C.I.E., F.R.S., F.S.A.,
President, in the Chair.

The Minutes of the last Annual General Meeting were read and confirmed.

Mr. J. Allan and Mr. Bernard Roth were appointed scrutineers of the ballot for the Election of the Council and the Officers for the ensuing year.

The following Report of the Council was then read to the meeting :—

LADIES AND GENTLEMEN,—The Council have again the honour to lay before you their Annual Report as to the state of the Royal Numismatic Society both numerical and financial.

It is with deep regret that they have to announce the death of the following five Fellows :—

Harold Bolles Bowles, Esq.

Stephen W. Bushell, Esq., M.D., C.M.G.

Major-General Sir Matthew W. E. Gossset, K.C.B.

W. S. Lincoln, Esq., Sen.

F. G. Hilton Price, Esq., Dir. S.A.

The Council also much regret to announce the resignation of the following three Ordinary Fellows :—

Prof. L. White King, C.S.I., F.S.A.

H. Neville Langton, Esq.

John E. T. Loveday, Esq.

On the other hand, the Council have much pleasure in recording the Election of the following four Ordinary Fellows :—

H.S.H. Vice-Admiral Prince Louis of Battenburg,
G.C.B., G.C.V.O., K.C.M.G.

Wayte Raymond, Esq.

Edward Shepherd, Esq.

Henry Symonds, Esq.

The number of Fellows is, therefore :—

	Ordinary.	Honorary.	Total.
June, 1908	295	22	317
Since elected	4	—	4
	299	22	321
Deceased	5	—	5
Resigned	3	—	3
June, 1909	291	22	313

The Council have to announce that they have awarded the Medal of the Society to Mr. Herbert A. Grueber, Keeper of Coins and Medals in the British Museum, for his services to numismatic science, especially in connexion with Roman, Mediaeval, and British coins and medals.

The Hon. Treasurer's Report, which follows, was submitted to the Meeting.

STATEMENT OF RECEIPTS AND DISBURSE-
FROM JUNE, 1908,

Dr.

THE ROYAL NUMISMATIC SOCIETY IN ACCOUNT

	£	s.	d.	£	s.	d.	£	s.	d.
To Messrs. Clowes and Sons, Ltd., for printing <i>Chronicle</i> ,									
" " Part IV., 1907, and									
Part I., 1908	88	18	3						
" " Part II., 1908	59	6	10						
" " Part III., 1908	49	0	8						
" " Part IV., 1908	49	10	8						
							246	16	5
" University Press (Plates for <i>Chronicle</i>)	31	2	6						
" Ditto (ditto)	14	14	6						
" Artist Illustrators (Engraving Coins)	0	17	0						
" F. Anderson, Drawing Coins	1	2	0						
" The Autotype Co. (Plates for <i>Chronicle</i>)	13	15	5						
							61	11	5
" <i>Books, Book-cases, &c.—</i>									308 7 10
Messrs. Spink & Son, Ltd.	4	12	6						
Messrs. Hachette and Co.	0	7	6						
Messrs. Williams and Norgate	0	8	0						
The Globe Wernicke Co. (Book-cases)	2	17	6						8 5 6
" Rent, Royal Asiatic Society							30	0	0
" Insurance Premium (Liverpool, London & Globe)							0	15	0
" Refreshments							11	12	11
" Engraving Medal (Pinches)							0	4	0
" Petty Cash							7	10	8
" Balance (Montagu Bequest Dividends)	10	13	7						
" " (General)	272	11	11						
							283	5	6

£650 1 5

MENTS OF THE ROYAL NUMISMATIC SOCIETY,
to JUNE, 1909.

WITH PERCY H. WEBB, HON. TREASURER.

£s.

	£	s.	d.	£	s.	d.
By Balance in hand (General)	267	7	6			
" " " (Dividends on Montagu Bequest)	8	15	2			
				276	2	8
" Subscriptions, 243 at £1 1s. (less loss on foreign cheques)	255	2	10			
" 1 Life Subscription	15	15	0			
" Entrance Fees	4	4	0			
				275	1	10
" Sale of <i>Chronicle</i>	68	3	11			
" " Books	0	5	0			
				68	8	11
" London & North-Western Ry. Co. Dividend, £800, 4 ⁷ / ₁₀ Preference Stock				30	8	0

£650 1 5

PERCY H. WEBB, *Hon. Treasurer.*

Audited and found correct,

HUGH D. McEWEN, } *Hon. Auditors.*
W. BERESFORD SMITH, }

June 11, 1909.

The Reports of the Council and of the Treasurer having been adopted, the President then proceeded to present the Society's Medal to Mr. H. A. Grueber, and addressed him as follows :—

It now becomes my duty to say a few words on your behalf in presenting our Silver Medal to a very devoted friend of this Society and a most industrious and skilled numismatist—our late Secretary, Mr. Grueber. The honour looks somewhat belated. If it be so, it has been due to Mr. Grueber's own wishes in the matter. His modesty and reticence have prompted him to give place to others in this as in other matters, until the pressure of the Council and its unanimous wish became irresistible. I feel sure that the choice of the Council will be unanimously approved by the Society. It was proposed by our most distinguished Fellow, Dr. Head, who has been a lifelong co-worker in the same fields of research, and who could speak on the matter with full knowledge of the obligations the science of numismatics, no less than ourselves, has been put under during many years by our kind and gentle friend. His life has been entirely devoted to the cause we cultivate in this room. The main part of the double burden of the Secretary's duties and of editing our Journal have been cheerfully and continuously performed by him in the scanty leisure alone available to one administering a very laborious and exacting department of the British Museum; and much of the prosperity which the Society has attained and of the reputation of its Journal have been the outcome of his paternal solicitude. He has attended its meetings with conspicuous regularity. When papers have run short he has filled the gap, and he has always had something wise and new to say about the various questions that have arisen in the diversified branches of the science on which he had many claims to teach us. In addition to his intimate knowledge of the history of the coins and their lessons, he has had the keen eye and nice touch which have

enabled him to separate spurious numismatic documents from genuine ones. His judgment must have failed sometimes, but this is inevitable. The forger has become a most dexterous person, and when assisted by dishonest men who have knowledge, the combination may be too much for us all, and I foresee sometimes a lurid sky in future days, when these enemies of archaeological science may completely beat us, and the study of numismatics may become well-nigh impossible. Meanwhile I need not emphasize the gain it has been to ourselves here and to the great Museum collection to have one so experienced and trained and acute in discriminating the false and true in our evidence, and one endowed with a phenomenal memory for minute distinctions and resemblances in coins.

These are all reasons which make it pleasant to us to perform that we are performing to-day. But it is not for these things that our Medal is awarded; nor yet is it for personal qualities which enlarge the number of a man's friends,—I mean the kind of man who has ever been gentle and urbane, ready at all times to let others share his knowledge, to give away the product of his own induction without reticence, and above all, to sacrifice his precious hours in helping others; to examine great parcels of uninteresting coins for exacting and tiresome bores who know very little and expect busy men to help them to solve unimportant riddles, and to perform kind services of every kind for plodding students who need help.

I said that it was not for these amiable qualities (which our friend possesses so largely) that we give him our Medal. A man must earn that prize by original work, either in the classification of coins, in tracing their history, or in discovering their relationship and analogies; and it is for such an abundant harvest he has reaped in many fields that we wish to reward him with a mark of our regard and approval.

He has been the author of several notable memoirs which

have illuminated and greatly advanced our science. His greatest work it is not possible to discuss to-day, since it is not yet published, but I may speak of it with some confidence (since I have had the advantage of reading the proofs), as being a worthy crown to our friend's career. Full to overflowing with learning and research, and full also of those acknowledgments of indebtedness to others, which mark off the real student from the charlatan. I refer to the *Catalogue* of the rich collection of Roman Republican coins in the British Museum, in two very large volumes, with over one hundred plates, in which the coins have been for the first time arranged according to their dates, and not according to the mere names of moneyers. In this notable work Mr. Grueber has incorporated the life-work of a predecessor who wrote hardly anything (the late Count de Salis), but who arranged the collection in the British Museum cabinets in a marvellously accurate and useful way. The book, we all hope, will be published this year.

Secondly, Mr. Grueber was, jointly with the late Sir A. W. Franks, the author of the well-known and indispensable *Medallic Illustrations*, in which the research displayed and the interesting facts collected about the subjects of the medals make it a most useful text-book for the historian as well as for the numismatist. The text of this notable book is, as you know, being now completed by the publication of a series of splendid plates,—imperial, I may call them in size and beauty, which are being edited with his usual taste and completeness by Mr. Grueber.

Thirdly, those of us who are interested in the Anglo-Saxon series have reason to gratefully remember another large work also produced by Mr. Grueber, in conjunction with another scholar and friend of ours, Mr. Keary, who has abandoned the field of numismatics and of Northern history for the more romantic glades of Arcadia. The introduction to the work I refer to is a masterpiece of condensed information, and the text only suffers from the fate of all Museum catalogues in

becoming obsolete by the growth of the collection. It is most important for historians and others that as soon as may be the additional treasures in this particular field of domestic numismatics possessed by the Museum should be published in a supplementary catalogue, together with the corresponding coinage of the Danish Kings of Ireland. It was a perpetual cause of complaint to my friend, Yorke Powell, the late Regius Professor of History at Oxford, that this latter series had been excluded from the *Catalogue*, and I hope sincerely that a supplementary volume will yet be edited by Mr. Grueber, when the additions to the Saxon series and the Irish series will be published together. May we also hope that within some reasonable time the continuance of the English catalogue will be undertaken? It is loudly called for by many numismatists whose hearts are devoted to the national series, and who cannot study it properly until the Metropolitan collection has been catalogued.

In addition to the great works already named, Mr. Grueber has published more than one manual on numismatics to help the ambitious and yearning youth of these realms, of whom I am one, to learn something of coins, such as the *Guide to the English Medals in the British Museum*; *A Hand-book of the Coins of Great Britain and Ireland*; and a new and virtually rewritten edition of Thorburn's *Guide to the Coins of Great Britain and Ireland*.

In addition to this, as you are all aware, the pages of the *Chronicle* are full of proofs of Mr. Grueber's industry and versatility in every part of Roman and English numismatics, and a complete collection of his communications would make a formidable addition to the size and weight of our volumes. This, then, is the harvest for which we propose to-night to reward the reaper by giving him the only reward of a material kind that it is in our power to give him. It will not go alone, however; it will be accompanied by the affectionate regard of us all.

Mr. Grueber, I feel greatly honoured and pleased to present this Medal to one of my oldest and dearest friends. It is the wish, I know, of us all that you may live long to cherish the memories of to-night. May your friends increase with your years, and may the sunshine which we hope will attend your footsteps shine brightly also on all those you love best.

On receiving the Medal, Mr. Grueber replied as follows:—

Sir Henry, ladies and gentlemen,—I thank you most heartily for the reception you have given me, and the Council for having honoured me with the Medal of the Society. I also thank you, Mr. President, for the very flattering expressions which have accompanied your handing the Medal to me on behalf of the Council. The distinction which has been conferred upon me is one that I shall always much value, and perhaps the more so as my name will be associated with those of so many illustrious numismatists, among whom are numbered Mommsen, Imhoof-Blumer, Waddington, Cunningham, Poole, Babelon, Dressel, and many others of equal degree of eminence, of whom I would specially select my old colleague, Dr. Head, upon whom recently and more deservedly the same honour was conferred.

The question of giving me the Medal was discussed by the Council in April, and as my name was amongst those selected, I asked, from private reasons, that the honour should be deferred a little longer. But perhaps, after all, this occasion is not altogether an unfitting one, as you will have seen by the balloting papers which you have received that to-day I resign my office as one of the Secretaries of the Society. I am quite abashed when I consider how many more fitting to perform the duties I have kept out of the post. When Sir John Evans was elected President, I took his place as Secretary. That was in 1874, thirty-five years ago. I entered on the duties at an early age, almost still a youth; I now leave it

an old man in years, but still, I am glad to say, in good health and fully prepared to devote myself for some time to come to the interests and welfare of the Society, and to a subject with which we all here to-night are so closely connected.

Circumstances have been such that I could not well have taken my departure sooner. In the first place, I felt it my duty to be loyal to my old and esteemed colleague, Dr. Head, and so long as he kept in harness I was bound to bear with him the burden of the work.

Owing to his health mostly, and also to his official duties, Dr. Head resigned in 1895, and his place was then filled by Professor Rapson. I then thought there was a chance of my being able, after so many years, to give up the post, but fate determined otherwise, for Professor Rapson's tenure of office was suddenly brought to a close by his transference to Cambridge. Under the circumstances I did not like to desert our late President, for whom I had, and shall always have, the highest esteem and regard. I hope, therefore, you will forgive me for having blocked the way for so many years.

In my successor, Mr. Allan, if you elect him this evening, you will find a very capable man, and one who, I am sure, will perform his duties satisfactorily and efficiently. Mr. Allan will bring into his work the vigour of youth, which is always beneficial to an old Society like ours. For my own part, I think that the Council have done well in nominating Mr. Allan, as it is important that one of the Secretaries should be in close touch with the Department of Coins and Medals, and if possible a member of that staff. Those in the Museum are in daily correspondence with numismatists outside the country, and it is greatly due to this circumstance that the contributions to the *Chronicle*, which are so catholic in their character, have been kept up to so high a standard. It is also important to the editors of the *Chronicle* that they should be in direct relation with the Museum officials; and, from my own experience, it is only in this

manner that the publication of the Society's Journal can be kept going. For many years all the contributions have passed through my hands in the first instance ; and I know what an advantage it will be to me to have one so near at hand whom I can consult as to the order in which the papers should be read before the Society at its meetings. It is the same with foreign publications of a similar nature. M. Babelon and M. Blanchet are editors of the *Revue Numismatique*, Dr. Dressel and Dr. Menadier perform the same duties for the *Zeitschrift für Numismatik*, and Dr. Kenner for the *Numismatische Zeitschrift*, the three leading continental numismatic journals.

I do not think I need add more to what I have said, except to thank the Council again for the honour it has conferred upon me, and also to thank you all for the flattering reception you have given me this evening.

The President then delivered the following address :—

THE PRESIDENT'S ADDRESS.

I cannot address this Society for the first time from this chair on the occasion of its Annual Meeting, when it takes note of its progress and presents its balance-sheet, without the recurrence of some memories. The first of these is associated with my distinguished predecessor, who steered its fortunes for an altogether unprecedented time and with such remarkable aptitude and success. The pages of the *Numismatic Chronicle* teem with proofs of his varied and accurate knowledge, of his keen insight, of his literary skill and humour, and further of his extraordinary success as a collector. In all these circumstances his career must remain largely unique. Even if more gifted than I can claim to be, any successor of his must find it very difficult to traverse the road he followed so successfully, for a very good reason. Our main purpose here is not to

repeat what has been published elsewhere, but to make new discoveries either in facts or in inference, and when a master in the craft has devoted fifty years of his life to exploration, it follows that the more obvious and more readily discoverable facts have been largely garnered and harvested, and that if we are to continue the same kind of work it must be by becoming more and more specialized, which means that the results have to be got at by increasing harass. Nor is it possible to rival the opportunities of a keen-eyed collector who was endowed with wealth and unqualified energy, and traversed the civilized world in search of treasures. The earth has been generous in restoring to us its buried numismatic treasures, but these naturally become gradually exhausted, or rather the finds become scarcer. The rarer coins and those about which something new can be said, become fewer and fewer, and tend to become more and more enshrined in the public museums or appropriated by some giant collector, so that the race of old-fashioned collectors and their opportunities tend to grow smaller. Especially is this so where, as among our own English coins, the gleaners have been so many, until the facts to be discovered become of increasing unimportance and triviality, so that the mere collectors of curios run the risk of taking the place of the scientific numismatist.

When, therefore, we turn over the pages of our incomparable *Chronicle*, and we notice how it teems with the many-sided papers and addresses of our former President, we must remember that he lived in the ideal age of the science which he did so much to endow with a higher scientific spirit, and that when so much of the golden fruit has been collected from the Garden of the Hesperides, we must be content to take what has been left behind, which means we must be content with a smaller and a more difficult *rôle*, one that cannot be so showy and so prominent, and can only trust that, by the application of such well-tested methods as he used, our results, whether small or great, may be inspired by the

same scientific spirit. In speaking thus I must not be understood to preach the despairing doctrine that the undiscovered and unilluminated corners of our science run the risk of being exhausted. I only mean that the task of exploration becomes daily more difficult, more specialized, and more controlled by the laws and conditions of a stricter induction. The field, indeed, is a vast one, it covers the whole civilized world in which the process of exchanging the world's wealth has been facilitated by the use of certain counters we call coins, and in which certain other counters have a part which we call medals, whose direct purpose is the glorification of the great and the distinguished men and events that have marked the more dramatic chapters of history.

The mere collecting of coins and medals as curios and samples of the artistic triumphs of the medallist's art, form, and ought to form, a very subsidiary part of our work. To apply what the zoologist calls systematic methods to coins and medals, by noting minute differences and classifying the coins in classes and series accordingly, is important in the sense that all indices of knowledge are important, as all systematic work is; but we must ever keep in memory that the ultimate purpose of our study is to illuminate human history.

The first essential in history is an accurate and dependable chronology, the succession of kings and rulers and the dating of events form the scaffolding on which the more picturesque parts of the scroll of history have to be hung; and in coins we have the most reliable (because contemporary) records, where the names and succession of kings and their dates can be most satisfactorily studied.

Many people must wonder how it comes about that patient and learned scholars should devote their lives to studying series of coins like those of China and of the Further East, or those of the Muhammadans, in which the types are very uninteresting in themselves, and monotonous to an incredible extent, in their literary contents. It is not always realized

that the coins here referred to form almost the only guide we have for arranging the many and complicated dynasties of kings who ruled in the countries where they were struck, for ascertaining the length of their reigns, the principal towns of their empires (being those where they struck money) and the extent of their dominions. No one could testify to this with more authority than my kind friend, Dr. Codrington, who knows the Muhammadan series so well. It is a pity that a guide to the Chinese series is not at present available for English students—like the admirable Catalogue of the Muhammadan coins in the British Museum by Mr. Lane Poole—one volume only of the *Catalogue of Chinese Coins* having appeared when its most gifted and, in fact, inspired author, M. de la Couperie, died. No work calls for completion more loudly. The Muhammadan coins of India have been worked assiduously in numerous papers in the Transactions of the Bengal and Bombay branches of the Royal Asiatic Society, and by patient students like Mr. H. Nelson Wright, Mr. R. Burn, Mr. G. P. Taylor, and Mr. G. B. Bleasby; but those of Central and Western Asia have had in this country much less attention paid to them, and it is pleasant to find a new student of them entering the field lately through the medium of our *Chronicle*, in the person of Mr. Rabino. May I say that it would have been quite impossible to write even one volume of a work which occupied me many years, namely, the *History of the Mongols*, if the numismatists of Russia, of Belgium, and of France, had not made available the information supplied by the coins of Central Asia and of Persia!

Turning elsewhere to Greece and the innumerable artistic attractions of its coins, we must never forget that behind this art is an incomparable magazine of materials for the elucidating of ancient geography, which was generously used by Sir Edward Bunbury in his notable work on the history of *Ancient Geography*, and his articles in Smith's Dictionaries.

It contains a correspondingly vast wealth of materials on mythology, folk-lore, and the manifold municipal and political details of the public life of antiquity. In England we have produced a remarkable series of men who have illustrated the coinage of the Greek world. We must not forget that, after Eckhel, it was an Englishman, Leake, who first attacked the series in a really scientific way, and with the requisite scholarship and wide knowledge. It was another Englishman, who with vast patience, experience, and knowledge—my venerable friend, General Cunningham—following in the footsteps of Prinsep, was the first to lay the solid foundations of the numismatics of the Greeks of Further Asia and their descendants; Borrell and Waddington worked concurrently at the intricate and most interesting series of Asia Minor, and Bunbury covered the Greek world with his researches. But it has been in our own time that Englishmen have done full justice to the archaeological instincts of our race by the masterly treatment of the problems of the Greek coinage. No work on the series exists anywhere comparable to the *Historia Numorum* of our Fellow, Dr. Head; and the monumental Catalogue of the Greek Series in the British Museum, filling twenty-six volumes, in which the best and most patient scholarship of Head, Gardner, Wroth, and Hill—household names to us in this Society—have sustained at the highest level of ideal German methods the reputation of this country, and have been rivalled in our columns by the equally memorable work of Dr. A. Evans. Beyond the Tweed an important work on the same series has been produced in recent years in the quite ideal catalogue of the Hunterian Collection, by Dr. George Macdonald, whose treasures had been virtually buried for a century. Its author has favoured us with some most attractive papers, and I need not say how welcome anything he may write will always be to us.

One thing we must all deplore, and that is the decay and

disappearance of the race of English collectors of Greek coins. The more artistically attractive parts of the series have become more scarce and expensive, and therefore largely out of the reach of the modest collector, but fortunately a very large part of the Greek series, the so-called Imperial coins, struck all over the Greek world under the Roman domination are inexhaustibly interesting in their types and their lessons, and, being made in base metal, are comparatively cheap. It is to be hoped that the small phalanx of collectors of Greek coins in this country, who are at the same time competent critics of them, limited as it is at present to my venerable friend, Sir Hermann Weber, whose collection is so rich, Dr. A. Evans, Principal Headlam, Professor Oman, Mr. Maclean, and a few others, will soon be largely increased.

Turning to the Roman and later series, I prefer to postpone my remarks on the present condition of the study in these realms to another occasion, when a monumental work on Roman Numismatics, by our late Secretary, shall have appeared, as we hope it may in the course of a few months.

I will now turn to a short survey of our own work during the last year. It has been marked by the production in this country of at least one remarkable numismatic classic of very high order, namely, Mr. W. Wroth's *Catalogue of the Imperial Byzantine Coins in the British Museum*. This catalogue, in two lordly volumes, is illustrated with the generosity and profuseness which alone can make such a work valuable. It consists of 687 pages of letterpress and 77 plates, and is preceded by a most illuminating condensed account of the intricate history of the Eastern Empire, and of everything at present known about its coinage; and it will no doubt initiate a much wider interest in the series than has hitherto been shown within our four seas.

It is a notable fact that Gibbon's *Decline and Fall of the Roman Empire*, the finest history ever produced by an Englishman, both in style and matter, is still without a rival, not

only by Englishmen, but by the scholars of all nations after a century and a quarter. It has been recently edited with great scholarship and learning by my friend, Professor Bury. He has filled many small gaps, and has gleaned a large number of fresh facts from the works which have been made available to the student of the subject since Gibbon's time, and his name will always be associated with the incomparable work which still remains unapproachable in its breadth of philosophical induction, its majestic style, its sane judgment about the value of authorities and the trend of events, and its extraordinary power of presenting the facts so completely and lucidly that few incidents of any importance in the long panorama have been overlooked, and almost every character prominent or obscure in its progress has at least a paragraph. This was all accomplished, be it known, before the introduction of German methods of historical writing, and the floods of light which archaeology has thrown on every obscure corner of history.

It is a no less remarkable fact that the country which produced Gibbon's *History* has until now never had any work, even an elementary one, dealing with the coins of the Eastern Empire, and yet no department of history is more dependent than this one for its scaffolding of chronology as presented by the continuous records of contemporary documents supplied by coins.

The lack just referred to has not been because England has not produced a numismatist both very capable and very much interested in the series—I mean the late Count de Salis—one who, without publishing anything of any moment, did perhaps more for the correct assignment of the coins to their respective mints and for their scientific arrangement than any one. His bountiful generosity and public spirit did much to enrich the fine collection in the British Museum with a large number of rare pieces, as well as to arrange them in the cabinets in a scientific fashion.

It is fitting and very welcome to us in this Society, which

has profited so much by Mr. Wroth's long series of learned papers on the British Museum acquisitions of Greek coins, that he should have put the crown upon his work by producing a complete and an ideal catalogue, which will entirely displace the inchoate works of De Sauley and Sabatier.

Mr. Wroth's two volumes deal with the series from the accession of Anastasius the First in 491 A.D. down to the capture of Constantinople by the Turks. This in itself points the moral of great changes which have taken place in the point of view of treating the history of the Roman Empire and all that appertains to its art and administration. The removal of the capital from Italy to the Bosphorus was rather an accidental than a material element in its fateful progress; and, thanks to Freeman, Bryce, and a large number of other modern students, we now realize that there was no conspicuous breach in the history of the Empire caused either by the founding of a new capital or by the destruction of the old one by the Heruli and Goths. The stately machine went on very much as before with vicissitudes of fortune, and more than once recovered its lost provinces and prestige, and remained in many ways the nursing-mother of European civilization, from whose womb the progeny of Western nations sprang.

Mr. Wroth's numismatic instinct, agreeing with that of De Sauley, Burgon, Barthélemy, Babelon, and de Salis, has fixed upon the reign of Anastasius as the beginning of his work, not because of any historic breach, but because he was responsible for a notable reform of the bronze coinage of the Empire and the introduction of the large *folles*, each of the value of 40 nummia, with smaller denominations of 20, 10, and 5 nummia, which long remained characteristic of Byzantine coinage. He has arranged the coins of each reign under its several mints, irrespective of the metal of the coins—the method alone useful to the student. In each mint the coins

are arranged under their denominations, under which again they are classified chronologically.

A feature of the series which will be at once noted is the comparatively great scarcity of the silver coins as compared with those of gold and copper. The only mints described in these volumes are the Imperial ones of Constantinople, Thessalonica, Nicomedia, Cyzicus, Antioch, Isaura, Constantia (Cyprus), Alexandria, Carthage, Sicily, Rome, Ravenna, Cherson, and some uncertain ones.

Notable coins in the series are the so-called family coins, on which the Emperors placed not only their own portraits, but those of their families, and these afford considerable assistance to the historian.

The work is prefixed by an excellent introduction, in which all the literary notices about the coins have been industriously collected. The meaning and succession of the types, the changes in the denominations and the weights, the artistic character and portraiture, and the inscriptions and dates have also been discussed. With regard to the inscriptions on the coins, which in many cases are difficult to read, it is noteworthy that, although Constantinople was the focus of the Greek world, they continued to be in Latin until the beginning of the ninth century, showing, like the Latin Codes of Justinian, how continuous the story of old Rome really was.

As is now the practice in the British Museum Catalogues, a number of the rarer and more notable pieces in the foreign collections are also figured. This practice might with considerable profit have been enlarged in the case of a catalogue like the present, which will necessarily be the standard work on the subject for a long time to come. It enables us not only to grasp the whole series better, but also to find readily the lacunae in the series which need to be filled up. It is to be hoped that the publication of this work will lead to a closer and keener study of the Byzantine series by English

collectors and students, who have hitherto been largely shut out from this field for need of an available guide.

Another work, which has recently been published in England, on an even more obscure and difficult series, in which the ground had to be largely ploughed as well as sown, is the *Catalogue of the Coins of the Andhras and the Western Kshatrapas, &c.*, by Professor E. J. Rapson. He has lately left the British Museum for a Chair at Cambridge, very much to its loss, for his knowledge of the history and archaeology of India and its neighbours is phenomenal. He has been for many years a co-editor of our *Chronicle*, and an ever-accessible friend to all students. You will allow me to express the hope from this chair that he will continue to visit our meetings and contribute to our transactions, and to let us profit by what is even better than his knowledge, namely, his urbanity.

His work deals with the coinages of certain dynasties of India. The first of these whose coins are described is that of the so-called Andhras, who sprang from the country of the Dravidian Telugus between the rivers Kistna and Godavary, north of Madras. They formed part of the empire of the great Buddhist king Asoka, but were never completely conquered by him. On his death they became independent, and eventually formed a most potent empire including the present province of Gujerat, parts of Malwa, Central India, and Berar, the Northern Konkan, and the portion of the Bombay Presidency lying immediately north of Nasik, when their rulers bore the proud title of Lords of the Deccan. Their history ranges roughly from the beginning of the second century B.C. to the first part of the third century A.D. According to the Puranas, it consisted of twenty-nine kings and lasted for 456 to 460 years, a period during which Indian history is very largely to be gathered from coins and inscriptions, and has been pieced together in a scientific fashion only in recent years. While the series of the Andhra coins is unfortunately

incomplete, the inscriptions are more available, and Professor Rapson's introduction, which is an encyclopaedia of all that is known of the dynasty and its doings, dissects forty-five of them. He has also scoured every other collection and apparently every memoir to bring together all that can at present be known of the coins. The legends on these coins are often so fragmentary and broken that it requires several of them to read one inscription, and it has needed all Professor Rapson's acuteness to piece them together. He has classed them according to the various local districts where they are found, and which present special type-features.

The metals used for the coins are silver, copper, an alloy of copper called "potin" in the catalogue, and lead. Unfortunately, a very large proportion of them are of lead, and consequently easily defaced. The legends are all written in one or other of the decayed Sanscrit dialects known as Prakrit, and especially in that called Drāvidi by Bühler, by which he also distinguishes the alphabet in which they are written. This Drāvidi alphabet is so named from being the Drāvidian form of the well-known Brāhmi alphabet.

The catalogue, in addition to the coinage of the Andhras and their feudatories, also contains a much more important series from the numismatic point of view, namely, that of the so-called Western Kshatrapas, on which Cunningham, Newton and Bhagvānlāl have all written. Probably Kshatrapa is the Sanscrit form of the old Persian Khshathrapāvan, "protector of the land." It is applied, says Professor Rapson, to Parthians and Scythians, but never used in Sanscrit or Prakrit literature. It is better known in its Western form of Satrap.

On the break-up of the Greek dominion in North-Western India, the satraps in various districts became independent, and in several instances initiated independent dynasties with coinages of their own, and notably at Kapasha, Taxila, Mathura, the Northern Kshatrapas, and Surashtra and Malwa, the

so-called Western Kshatrapas. It is the coins of these last, and two small contemporary and perhaps subordinate dynasties, the Traikūṣakas and the Bodhis, which are alone described in this volume. They clearly sprang from the North, as is shown by the use of the so-called Kharoṣṭhi alphabet on their earlier coins, which was only replaced by the Brāhmi alphabet, the prevailing one in the districts of Kathiawar, Gujerat, and Malwa, the seats of these Western satraps.

They were divided into two stocks, both of foreign but allied blood, and running concurrently in different districts, the Kṣaharātas and the Caṣṭanas; the former Professor Rapson associates with the Pahlavas or Parthians, and the latter with the Sakas or Scyths. Their coins and inscriptions are dated by the Saka era of 78 A.D. The silver coins are clearly imitated in standard from the hemidrachms of the Græco-Indian kings. The satraps themselves were apparently feudatories of the Kushan Kings of Caubul. For everything that is known in regard to the history and coinage of these very important dynasties I must refer to Professor Rapson's detailed and illuminating introduction. It is very pleasant to find it so full and complete. It is, in fact, most important that, in dealing with series of coins which comprise so largely the materials of Indian history, the whole of the evidence should be collected and put together in this fashion instead of in mere bald numismatic details; and it is quite certain that for this period of the history of our Eastern Empire the student will in future have to take this notable catalogue as a text-book.

I ought to add, and it is very pleasant to do so, that the fine collection of the coins of the Western Kshatrapas in the British Museum is largely due to the munificence of an Indian gentleman, the Pandit Bhagvānlāl Indrājī, who also did so much to illustrate them. I also notice that among those to whom obligations are expressed by Professor Rapson in the preface is our most esteemed librarian. Is it not

possible to persuade him to give us the advantage of some of his manifold learning on Indian and especially Muhammadan coins, by some further contributions to our Journal?

I have described these two volumes at some length, not only from their worth, but from the fact that in each case they so very largely break new ground which is now accessible to all students.

In Greek numismatics we have had a paper from Dr. Head on one of those puzzles which are continually meeting us in studying the epigraphic records of the ancients, and which frequently elude solution. A number of tesserae which have been decided not to be tokens, exist, struck apparently at Ephesus, judging from their having a bee on the reverse, while the obverse has a kneeling stag with a reversed head, which doubtless was a symbol of the Ephesian goddess. The puzzle involved is in the inscription, comprising more than one unusual word. This has been explained by Eckhel as referring to *κρύος*, some kind of medicament compounded of bees-wax; *πρός*, against; *πάληψ* or *πάληψς*, some unknown malady; and he claims that they were in fact, druggists' advertisements or tokens. Dr. Head, while duly appreciating the case made out for this interpretation, suggests tentatively another one—that the inscription on the tesserae was possibly a charm or spell meant to be used by a bee-keeper who chanted the words to call the bees home. It is not for me to hold the balance between these two suggestions. I am content to read with delight the out-of-the-way learning which has been brought to bear on the issue.

Dr. Headlam has favoured us with a communication on the coins of Syracuse, marked by his usual learning and insight. I always think that the royal dynasty of Syracuse may be compared with that of the Medici at Florence in their patronage of literature, art, and science, and that it caused a large transfer of the best culture of the Mediterranean from Greece proper to Sicily, and eventually to the Italian peninsula. It is not

strange that this movement should have affected the coinage and should have resulted in a series of coins whose variety and high artistic excellence are only less interesting to many of us than the fact that the names of the masters who made them are known to us. The series has exercised the practised skill of Dr. Head and Dr. Arthur Evans, and the proofs of their best work in it are among the treasures of our annals. More recently it has also occupied the very acute and accomplished pen of our Fellow, Mr. Hill, in his capital monograph on the Coins of Ancient Sicily. Dr. Headlam has shown very strong reasons for putting somewhat later than Dr. Evans the beginning of the highest development in the art of the coins, and for making it coincide with the period of internal peace and prosperity inaugurated by the congress at Gela, which conclusion he sums up in a notable sentence which I will quote, namely, that "the rapid manner in which the new art spread throughout Sicily, the celerity with which the different cities copied the new designs, the easy intercourse, shown by the fact that the same artists worked in so many different places, all suggest that we have the reflection of this period of peace." Dr. Headlam has further given very good reasons for holding that the coinage of Syracuse, Gela, and Leontini, was in its origin a dynastic coinage, and not merely a civic coinage.

Another interesting paper on Greek numismatics published during the year has been that on a pre-Macedonian mint in Egypt, by Mr. J. Mavrogordato. The question has long been discussed, and remains still a doubtful one, nor has it been finally closed by the great work of Svoronos on the Egyptian series, which has supplied us with so much important material.

It is clear that the Egyptians themselves used no coined money, and that when money was introduced into Egypt it was Greek money, but the question as to when this took place is not easy to solve. We know that the Greeks of Naucratis

had an autonomous coinage of small coins. It is very probable also that certain imitations of Athenian tetradrachms, issued by the Satraps of Cilicia and Egypt for the payment of the mercenary Greek fleet in the service of the last Persian king of the Achaemenian dynasty, to which I have myself referred in the *Chronicle*, may have been struck in some Egyptian town, but the Aramaic characters on them make this doubtful. Mr. Mavrogordato now adds some obols of Athenian type, and containing symbols and an imitation of a cartouche which seem to point to an Egyptian origin. My own view would be that these coins were, like those of the Satrap Sabakes already referred to, meant to pay the Greek and Phoenician mercenaries in the fleet, and that the symbols on them are not truly Egyptian, but bastard copies, such as are familiar on many Phoenician objects, and notably on the coins of the Satraps Mazaios and Datames, and that they may have been struck in any town of Cilicia or Syria. It seems incredible that any national Egyptian coinage should have been initiated by these small pieces, and, indeed, until the Ptolemies, who had a large army of Greeks in their service, began their famous coinage. The paper of Mr. Mavrogordato is excellently written, and a very interesting contribution to what is at present a doubtful issue.

Turning to the coins of Rome, I must just mention the last communication made to our pages by our late President. It contains a description of some unpublished gold coins from his own very rich cabinet, which was so frequently laid under contribution to our profit. Four of the coins are of special interest: (i.) The gold coin of the Antestia gens, struck by the moneyer C. Antestius Vetus, in the year 16 B.C., of the highest rarity, only one other being known. The coin has an interesting reverse, representing the sacrifice of a bull: it is not represented in the British Museum, where the series of the consular coins in gold is so rich. It may be hoped that it will some time find its way there. (ii.) A

coin of Pescennius Niger, whose aurei are particularly scarce. (iii.) One of two only known gold coins of Balbinus, the poet and orator, who had been a successful provincial governor, and who was set up by the Senate against the tyrant Maximus, and killed directly after by the turbulent soldiery. And (iv.) a rare coin of Magnus Maximus, who was set up as Emperor in Britain in 383. It was struck at London.

It is a happy event that the fine collection of coins of Sir John Evans has passed to his son, who is so competent to make good use of it, and who is likely to increase it, and I hope he will soon let us have some of the results of his researches upon it.

A second paper on the Roman series was contributed to our pages by Mr. J. G. Milne. It deals with the leaden token-coinage, one of those obscure series which have been much neglected by numismatists and collectors of coins, because of their generally poor preservation and unattractive appearance. Mr. Milne assigns these tokens to the second and third centuries A.D., and divides them into two series, one with the type of Athene, which he attributes to Oxyrhynchus; and another group, marked by the effigy of Nilus, which may have been struck anywhere in Egypt. Their use seems to have spread over the Delta and Middle Egypt. They seem to have taken the place in the daily life of the people of the earlier bronze coins, as they are found above them in the rubbish-heaps.

We have been very glad to welcome a communication from Mrs. Esdaile, who, by her maiden name, is not unknown to the readers of the *Chronicle*. On this occasion she discusses a medallion of the kind known as a mule, in which the obverse and reverse of two different types have been united in the same casting. On one side the medallion has a type of a similar piece of Lucilla, with a legend adapted to Faustina the Younger, and on the other a type taken from the bronze coinage of the Elder Faustina. The chief interest of the

medallion is in the latter or reverse face, on which Cybele is represented enthroned between two lions. This goddess occurs very rarely until the reign of Marcus Aurelius. In this instance she is accompanied by the inscription, "*Matri Deum salutari*," Mrs. Esdaile illustrates the significance both of type and inscription by a comparison with a rare conterniate, on which both occur, and by her usual wealth of information from obscure sources.

Two hoards of Roman coins, found one at Brooklands in Surrey, the other at Icklingham, have afforded Mr. Hill the occasion for an elaborate and laborious analysis on those lines which are alone fruitful, and which are producing so many results. They comprise many varieties of so-called middle brass of the Emperors Diocletian, Maximian, Constantius, and Galerius, and dating from about 297-305. The mints represented are London, Trier, Lyons, Tarraco, Siscia, and Carthage, showing what an extraordinary transfer of copper money was continually taking place from one end of the Empire to the other.

The second hoard consists of a find of 337 coins, unearthed many years ago. They all date from the end of the fourth century to the beginning of the fifth A.D.

I wish I could attribute the same value to a statement quoted from the Anglo-Saxon Chronicle of the year 418 by my friends Professor Oman and Mr. Hill. I have spent a good deal of time, and had some severe polemics, with the late Mr. Freeman and others, in which that doughty champion at length admitted he was wrong in asserting that not a single trustworthy statement on English matters occurs in the Anglo-Saxon Chronicle before the year 721 which is not taken from Bede. The earlier portion of that document, including the year 418, in so far as it refers to England, is pure fable.

In regard to the coins of this country, we have had an excellent paper by Mr. Bernard Roth on a large hoard of

uninscribed gold and silver ancient British coins found at South Ferriby, in Lincolnshire, in 1906. The fact of their being uninscribed makes these coins more difficult to deal with and describe, especially as they present us among the gold coins with types which have become in most cases mere echoes of the original prototype, in which a laurelled head was represented on one side and Victory in a biga on the other. It is fortunate, and in fact almost essential, that a large proportion of this important find is figured on the plates, no fewer than 65 being so represented. The silver coins are of much better style, and the horse, which forms the chief type, is quite respectably represented. While only a small proportion of the gold coins, again, have one face blank, almost all the silver ones are of this class. In one matter only I ventured in the discussion on the paper to join issue with the author. The coins were found in Lincolnshire, and, like all the similar coins known to me, were found south of the Humber. None of them, so far as I know, have ever been found in the country of the Brigantes, which was north of the Humber. Lincolnshire was inhabited by the Coritavi, to whom, and not the Brigantes, I think these coins should be assigned.

In the Anglo-Saxon series I may perhaps be allowed merely to refer to a paper of my own on the very interesting coinage of Egbert and the first Athelstane, who, I think I have shown, was his son. I hope it may contain something of permanent value.

Mr. Walters, our most loyal, industrious, and able colleague, has favoured us with an account of a find from Southampton Water. It consists of silver coins of Edward the First and Third, and the three Henrys, and of a sterling of Robert de Bethune, Count of Flanders, and the latest coins apparently date from 1435, when the hoard was probably deposited, and, as Mr. Walters says, its chief interest is as a sample of the money current in 1435.

Another hoard of silver coins of a later date, found at Bridgnorth, has been described for us by Mr. Kenyon, one of the veterans among the workers in the English series. The coins, 144 in number, are in bad condition, and range from the reign of Mary to that of Charles the First inclusive. Mr. Kenyon suggests that the hoard was buried in 1646, when so much fighting took place at Bridgnorth between the Royalist and Parliamentary forces.

The reign of Elizabeth has supplied Miss Helen Farquhar with materials for a very interesting paper, showing how far-reaching are the ties which unite numismatics with other branches of archaeological and historical research. It deals with the life-history and works of the famous miniature-painter, Nicholas Hilliard. By a process of admirable induction, Miss Farquhar has connected the Nicholas Hilliard, styled "Limner, Carver, and Jeweller," who is known to have made the Queen's second seal, with the maker of the Armada badge now in the possession of Mr. Pierpont Morgan, and other important badges or jewels of the day.

In a warrant of James the First, Hilliard is expressly called "our principal drawer for Small portraits, and embosser of our Medallies of Gold." As long ago as Pinkerton's *Medallic History*, a medal which he described was supposed to have been engraved by Hilliard. It was struck in 1604 in commemoration of the peace with Spain, and is described in *Med. Ill.*, i. 193, 14, Pl. xiv. 14. Miss Farquhar associates it with the Armada badge. It is to be hoped that fresh evidence will be forthcoming to make the conclusion complete.

In a second communication Miss Farquhar refers to a document in the State Paper Office, consisting of a grant with survivorship to John Gilbert and Edward Green, of the office of chief graver of the Mint and graver of the King's seals and arms in the place of William Holle, deceased, dated September 15, 1624. William Holle had been made Head

sculptor of the Iron for money in the Tower and elsewhere for life, by a grant of May 29, 1618. This discovery throws much light on the origin of the remarkably fine coins of the year 1619, and of the coins that were issued before and after that date.

We have been again favoured by another part of Mr. Hewlett's monograph on the Anglo-Gallic series, upon which we have had no authority since the late Colonel Ainslie wrote so admirably about it. It is fortunate that we have among us one so competent, who has himself a fine collection of the coins of this series, and who reminds us in every page of his most interesting papers of the fact we are apt to forget sometimes, that these coins, although struck in France and used in France, were just as much the coins of the Kings of England as were those issued from the Tower Mint, and as were the coins of Hanover during the whole eighteenth century, and that every one of them has something to tell us that is fresh and new about our ties with the picturesque country of Aquitaine and Poictou, whose castles, whose churches, and whose lovely towns of Poitiers, Limoges, Bordeaux, and Bayonne, remind us much of the old ties between the countries. The coins form a bridge between England and France, and I hope when Mr. Hewlett has finished this work he will have something also to tell us about that most interesting series, the feudal coinage of France. No one could do it better.

To Lady Evans we owe two communications: One of them on a unique silver plaque of Charles the First as prince, which was acquired in 1907 by Sir John Evans, and is a work of singular delicacy and taste, in which both horse and prince are picturesquely treated, and recalls in many ways an engraving by Renold Elstrach, who belonged to the school of Simon de Passe, who engraved so many admirable portraits in a style of his own on small counters, silver discs, &c., but on a much smaller scale than this. Lady Evans very

reasonably attributes the engraving either to Passe or Elstrach. We ought to congratulate her on the possession of such a choice object.

In a second paper Lady Evans describes at length, with interesting illustrative details, a medal of Anne Eldred, dated in 1678, an interesting specimen of a private medal of a peculiar type, which hardly seems to me to be Dutch, and rather suggests Flanders or North-Eastern France, where the school of design at this time recalls the method of treatment of the figure.

Lastly, I must refer to Mr. Rabino's paper on the coins of the Shahs of Persia from the accession of Shah Ishmael in the year 1500, when the Tartars and Turks, who had so long dominated the land, were displaced by a native dynasty, until they were in turn overthrown by Nadir Shah, the ancestor of the present dynasty. With very special and universal knowledge, Mr. Rabino has given us a full account of the weight system of the coins at this period, and its various changes, and of the principal variations in the types.

I should like to complete my survey of the numismatic publications of the past year in England, by a few notes on the papers which have appeared in the fourth volume of the *British Numismatic Journal*, for the loan of a copy of which I am indebted to Mr. Ready. The first paper deals with a subject not before treated in the same way, and which condenses an interesting aspect of the English coinage, by bringing together those coins in its long history which have more or less direct connexion with England's wars. It will be a surprise to many who are familiar with the aspect of the question as presented on medals to find so many examples on *actual coins* as have been illustrated in Colonel W. E. Morrieson's paper.

Mr. Carlyon Britton follows with two interesting papers, one on the issues of the mint of Berkeley, first as a Royal Manor, and afterwards under a grant of right of coinage by

the king to its feudal chiefs of the name, extending altogether from the reign of Edward the Confessor to that of Henry the Third inclusive.

In a second paper the same writer argues, and I think reasonably, that the mint-name occurring on certain coins of Aethelred II and Harold II, which reads "Judanburh," is not Jedburgh, as some have thought—an identification which was disputed by Sir John Evans—but Ythancaester, the Roman fortress of Othona on "the Saxon Shore."

This is followed by the second part of the same writer's detailed monograph on the coinage of the two first Williams, in which all the interesting coins are admirably represented in the plates, and their order of dates is carefully revised and their arrangement made more scientific.

This is followed by a third paper by our accomplished Fellow, Miss Helen Farquhar, profusely illustrated and written with great acumen and knowledge, on the attractive subject of the portraiture of the Tudor monarchs on their coins and medals. In this the medallie portraiture is admirably supplemented and illustrated by other portraits on plaques, miniatures, embossed jewels, &c. The paper should be attractive to other readers besides numismatists, and might profitably be published separately.

Dr. Lawrence follows with an account of an interesting discovery, namely, that of a new type in the well-worked gold series of Henry the Eighth, which was issued in August, 1526, being called the "crown of the rose," and which is known from documents, but no specimens of which had previously occurred.

My friend, the Rev. J. C. Cox, a versatile and accomplished antiquary, has discovered and now publishes an interesting account of the illicit coinage carried on on a considerable scale in the first years of the seventeenth century by an Irish official, namely, Sir John Brockitt, Constable of Duncannon Fort. Then follows a second paper by Colonel H. W. Morrison, forming a monograph on the silver coinage of James the

First. This is followed by two short but adequate papers, well illustrated, dealing with the Colonial coinage, namely, one on Early Australian Coins, and the other on that of the Ionian Islands when under the English dominion, the former by Mr. Alfred Chitty and the latter by Mr. Nathan Heywood. Then we have a monograph on the Copper Coinage of Queen Victoria, in which the minute varieties are duly described and figured. Next comes a paper by Mr. Bernard Roth, on certain recent large finds of primitive gold Gaulish coins, for the most part with one side in blank, and chiefly of the type assigned to the Morini. These coins resemble very closely a class of Early British coins found sporadically in these islands in various places and notably in Scotland, the type of which is Evans, Plate B, No. 8. Mr. Roth has, I think, shown, and the conclusion is an interesting one, that the coins found on this side of the Channel were imported from France and were not made here, and must be treated therefore as Gaulish adventitious coins, and not as British ones.

Then follows a description of a hoard of Roman brass coins recently found at the Bailgate, Lincoln, by Mr. Nathan Heywood. They range from Drusus to Valens, which is a very wide range, and points to the collection having probably been made from different layers in the ground.

A short but quite interesting communication from Dr. Auden shows from what various quarters numismatic evidence is sometimes forthcoming. He describes a small pictorial Anglo-Saxon cross in lead, on which has been impressed a styca of Osberht, King of Northumbria, thus enabling us to date it in the years 849-867.

Dr. Lawrence has recently devoted himself, with his usual skill and acuteness, to the analyzing of those of the forged coins of the English series which have hitherto been recognized. In his papers on the subject which he has been good enough to send me, he has collected a remarkable amount of evidence on the subject, and made out a very conclusive case. In the

present volume he gives us the second part of his paper, dealing with the coins from Edward the First to those of Elizabeth. No work could be more useful to the numismatist, the collector of coins, and the historian, especially as the delinquents are all figured. While this process of trial upon forged coins is most necessary, we must at the same time remember that the fact of pointing out the criteria of genuineness may stimulate the forger to more scientific efforts to deceive us.

Another paper on leaden English tokens deals with a much-neglected subject. Such tokens were in circulation in England at the beginning of the sixteenth century, as Erasmus testifies, but the principal issue of them was in the seventeenth century, between 1600 and 1670. They were put out by private people, probably traders, and apparently also under the patronage of the trade guilds, whose arms some of them bear. While most of them were substitutions for the dearer copper, many others, no doubt, were rather labels and counters. An interesting plate accompanies the paper.

Lastly, although it has little or nothing to do with numismatics, I must mention the first part of a remarkable and notable paper on the "Anglo-Saxon Computation of Historic Time in the Ninth Century," by Mr. Alfred Anscombe. This admirable paper is written with full knowledge of the facts and of the authorities both English and foreign, and will be indispensable not only to those who wish to study the chronology of the Anglo-Saxon period, but for those also who are engaged in the most necessary and yet difficult work of appraising the genuineness of Anglo-Saxon charters. I may be allowed to speak feelingly, being myself engaged on a monograph on the Anglo-Saxon Chronicle now being published in the *Archaeological Journal*, in which the pitfalls presented by these charters and the often crooked dating of the prime document of English history, are continually meeting us. The minuteness and completeness of

the paper may be judged from the fact that, although only the initial part, it comprises 70 quarto pages.

The rest of the volume deals with the details of the meetings of the Society and the various exhibits at its meetings, many of which are figured.

Before I conclude my Address, I must mention, according to custom, those Fellows whom we have lost by death during the past twelve months. The number, I am glad to see, is small, but nevertheless their loss will be much felt by us all.

By the death of our Fellow, Mr. Frederick George Hilton Price, this Society has lost one who took great interest in its work, and I have myself lost an old and very intimate friend. He died at Cannes, on March 14, quite suddenly and unexpectedly. A banker by profession, and an antiquary in his tastes, he gave much attention to the archaeology of his profession, and also to that of the City of London. His *Handbook of London Bankers* is an interesting treatise; whilst the *Marygold* and the *Signs of Lombard Street* deal with many important points connected with the mediaeval history of London. He was a collector of more than one class of objects. His collection of relics of Old London may be said to take the first place. Its *ensemble* was very varied, consisting of objects of almost every description, bronze implements, spoons, knives, ornaments, armour, and garments of mediaeval fashion. He was well known in the City, and whatsoever of interest was discovered was first brought to him. The collection is of such local importance that it is one which every effort should be made to keep in its entirety.

He also collected with great industry for many years a remarkable series of Egyptian antiquities, of which he printed an elaborate catalogue in two volumes.

It is, however, as a collector of coins and medals that we best knew him in these rooms. He was a frequent attendant

at our meetings, and usually brought with him interesting coins or medals for exhibition.

His collection of English coins, which was dispersed only a few days ago, shows the nature of his tastes. It was formed with a good deal of judgment and discretion, and very few cabinets have been sold of late years which contained in so small a compass so many pieces of numismatic and historical interest. I may add that several very important pieces were secured from it for the National Collection.

Mr. Hilton Price had not been long a Fellow of this Society, as he only joined in 1897. At the time of his death he was the Director of the Society of Antiquaries, President of the Egypt Exploration Fund, and a Vice-President of the Society of Biblical Archaeology. His genial and kindly disposition will make his loss keenly felt by all who knew him, and I can say that he left behind him many friends and no enemies.

Dr. Stephen Wootten Bushell, late Physician to the British Legation in Peking, was a son of the late Mr. William Bushell, of Moat Ash, near Sandwich, and was born on July 28, 1844. Educated at Guy's Hospital, he had a most successful career, being London University Exhibitioner, University Scholar and Gold Medallist, and taking successively the B.Sc., M.B., and M.D. degrees. After filling the position of house surgeon at Guy's Hospital, he was appointed in 1868 Physician to the British Legation in Peking, and occupied the post for over thirty years, retiring in 1900. During his long residence in China he formed two remarkable collections, one of porcelain, the other of coins. He was the author of a work on *Oriental Ceramic Art*, of a *Handbook on Chinese Art*, and of many articles on numismatics, which were chiefly published in the *China Review* and in the *Journal of the North China Branch of the Royal Asiatic Society*. He died on September 23 of last year.

In the death of General Sir Matthew W. E. Gosset, K.C.B.,

the nation lost an eminent soldier and a man of considerable literary taste. Born in 1840, the second son of Major Arthur Gosset, R.H.A., he first saw service in the 54th Regiment during the Mutiny in 1857, against the Chittagong Mutineers, and in 1857-59 in Lord Clive's campaign in Oudh. He served in South Africa from 1878 to 1881, and was appointed Assistant-Adjutant-General in Egypt in 1891. After commanding the Mandalay district from 1897-1901, he retired, and was appointed in 1903 Colonel of the Dorsetshire Regiment. He was made a C.B. in 1887, and in 1907, on the fiftieth anniversary of the Mutiny, he received the K.C.B. as one of the most distinguished veterans of that memorable struggle. Though the keenest of soldiers, his interests were very varied. He had a sound knowledge of painting, to which the books and the collection of carefully selected modern pictures in his home at Dedham bear witness.

Of Norman descent, General Gosset was an enthusiastic member of the Huguenot Society, as well as of other literary, artistic, and scientific societies, amongst the last being the Royal Numismatic Society, which he joined in 1885. As a collector of coins, General Gosset confined his attention principally to the Muhammadan coinage of India.

In Mr. W. S. Lincoln, the well-known dealer in Oxford Street, the Society has lost one of its oldest and most esteemed Fellows, and many of us a cherished personal friend. For a man of his years, Mr. Lincoln seemed till quite recently in vigorous health, and there was every sign and hope that he would long remain at the head of his firm. A few weeks ago, unfortunately, he had a seizure on returning home from his daily duties, and he died on May 8. I need scarcely say that we shall all miss him very much. He was the last remaining link with an interesting past, as he was personally acquainted with that long line of collectors and dealers of the nineteenth century who are only known to us by name and reputation. Quiet, gentle and unassuming, it

was always interesting to hear him speak of bygone days and bygone associations. His knowledge of numismatics was very wide, and ranged over the whole series; but it was chiefly limited to the practical side. When not attending to his customers, he worked assiduously at his collections, ticketing each specimen and noting its special interest. His judgment, always given with discretion, could be relied on, and no man was ever more respected in his profession. For many years he regularly attended our meetings, and it was only when he began to feel the strain of his daily labours as age came upon him that his visits became of less frequency.

I have now finished this survey of our year's work, and I must sit down. In doing so you will permit me to return you my grateful thanks for the urbanity and kindness I have received from you all—from the officers, from the Council, and from the Fellows, without which the position I hold would be intolerable. I hope, my kind friends, you will continue to help me, while I sit in this chair, in the duty of maintaining the reputation and dignity of the Society at its ancient level, and will be more than kind to my failings.

A vote of thanks to the President for his Address, moved by the Rev. Dr. Headlam, and seconded by Dr. Barclay Head, was carried unanimously.

The ballot for the Council and Officers for the ensuing year was declared, the following being elected:—

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The
Modern Copper Coins
of the
Muhammadans,

By W. H. VALENTINE.

This work, which it is proposed to issue shortly, is designed to popularise the study of Muhammadan copper coins, and is the outcome of a student's endeavour to identify and arrange them. To this end the author has made faithful drawings of all the specimens of this class of coin that he has been able to find. Commencing with Turkey, the reader is taken numismatically through Egypt, Tripoli, Tunis, Algiers, and Morocco, to Nigeria, (for which place the Royal Mint has recently struck a new coinage) and from thence back to East Africa and Arabia. Crossing from there to Europe, the tour continues through the Crimea, Georgia, Persia, Afghanistan, Bukhara, and terminates in Chinese Turkistan.

Upwards of 900 coins struck during the last three centuries are illustrated, and the Arabic inscriptions carefully transliterated and explained, as shown on the specimen page.

Afghanistan

- 43 Leaf between two swords
 ضرب احمد شاه ۱۲۵۰ R
 Jart Ahmadshahy 1250 DM
- 44 The same, shewing completed date dt 12/54 BM
- 45 Two bladed sword R 1250 ضرب فلوس احمد شاه ۱۲۵۰ DM
 Jart falus Ahmadshahy 1255
- 46 Same as last DM
- 47 Sword between two leaves R as no 45 but
 dated 57 / 12/56 BM
- 48 Sword between two leaves
 ضرب فلوس احمد شاه ۱۲۵۷ R
 Jart falus Ahmadshahy 1257 BM
- 49 Another DM
- 50 1250 - Falus 1260 -
 ضرب فلوس احمد شاه ۱۲۵۰ R
 Ahmadshahy BM
- 51 Shows another part of the same die BM
- 52 Ahmadshahy 3 M
 ضرب فلوس احمد شاه ۱۲۵۰ R
 Falus ۱۲۵۰ - ضرب
- 53 Leaf between two fish
 ضرب فلوس احمد شاه ۱۲۵۰ R
 Falus Ahmadshahy 3. BM
- 54 Star with arabique border R as last. A.M
- 55 BRITISH OCCUPATION. Imperial Crown
 ضرب قند هار ۶ R
 Jart Kandahar 6 BM
- 56 Flower on stem R ۱۲۷۵ ضرب فلوس احمد شاه ۱۲۷۵
 Falus Ahmadshahy 1265 BM
- 57 Kneer between swords R as last BM
- 58 Flower
 ضرب فلوس احمد شاه ۱۲۷۵ - ۱۲۸۱ R
 variety ۵ R
- 59 ضرب فلوس احمد شاه ۱۲۷۵ - ۱۲۸۱ R
 Jart falus Ahmadshahy 5 BM
- 60 Four petalled flower and four swords
 ضرب فلوس قند هار R
 Jart falus Kandahar DM
- 61 Eight leaved ornament. (see no 28)
 R similar to last. BM



To assist in the classification of the coins, a geographical arrangement has been adopted, and six coloured maps have been added to enable the reader to locate the various mints.

The interesting field covered by this work has never as yet been dealt with, possibly on account of the great expense involved. It has been suggested that this may be lessened by using the line block process, and printing the major portion in manuscript form as shown. The author hopes that sufficient promises of support will be received to enable the book to be published at a price not exceeding 10/6 a copy, and he trusts that numismatists generally will give the project a hearty support.

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See Vol. V.

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